INFLATION REPORT

December 2020

Recent trends and macroeconomic forecasts 2020-2022

CENTRAL RESERVE BANK OF PERU

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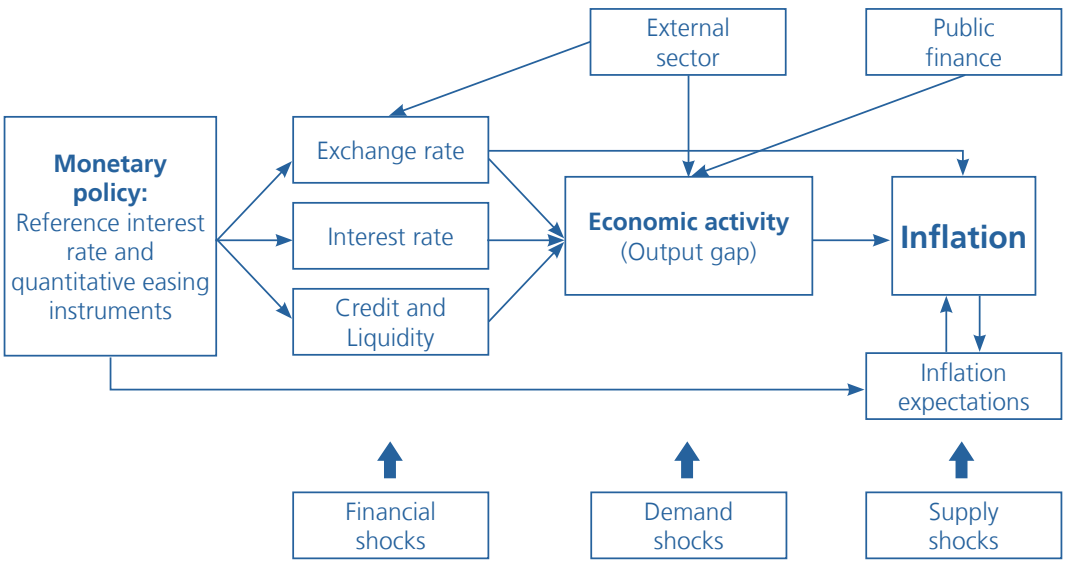

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BOXES

This ***Inflation Report*** has been prepared using data on the balance of payments and the gross domestic product as of the third quarter of 2020, data on the monthly GDP, the trade balance, and monetary accounts as of October 2020, and data on inflation, the operations of the non-financial public sector, financial markets, and the exchange rate as of November 2020.

Foreword

- According to the Constitution of Peru, the Central Reserve Bank of Peru (BCRP) is a public autonomous entity whose role is to preserve monetary stability. The BCRP is responsible for regulating the money supply and credit in the financial system, for managing the country's international reserves, and for reporting on the nation's finances.

- In order to consolidate this goal, the Bank's monetary policy is based on an inflation targeting scheme, with an inflation target between 1 and 3 percent. The Central Bank's inflation target is aimed at anchoring inflation expectations at a similar level to the inflation rate observed in developed economies and reflects the BCRP's permanent commitment with monetary stability.

- Since 2003, the Board of BCRP sets a benchmark rate for the interbank lending market each month, according to a previously announced schedule. In March and April of this year, the benchmark rate was modified outside of this schedule due to the economic contraction generated by the confinement measures taken because of the COVID-19 pandemic. Since this interest rate, which is the monetary operational target, affects the rate of inflation through several channels with time lags, this rate is set on the basis of forecasts of inflation and inflation determinants.

- Inflation may transitorily deviate from the target range due to shocks that may temporarily affect the supply of goods and services. It should be pointed out that the effectiveness of monetary policy is also assessed in terms of the success in maintaining inflation expectations within the target range and in returning them to this range within a reasonable timeframe if deviations are observed as a result of some economic shock.

- Additionally, the Central Bank implements preventive actions to preserve financial stability and monetary policy transmission mechanisms. Thus, the mechanism of the benchmark interest rate is complemented through other instruments such as injection and sterilization operations, reserve requirements, and interventions in the foreign exchange market to ensure the proper operation of markets, reduce excessive volatility in the exchange rate, and prevent excessive variations in the volume and composition of credit in the financial system by currencies and terms.

- In the exceptional case of this year, due to the magnitude of the shocks that the economy is facing, the benchmark rate is close to zero and the use of repo operations with different types of collateral and at longer terms has been significantly expanded.

- This Report includes the macroeconomic projections that support the monetary policy decisions of BCRP as well as an analysis of the risk factors that can modify such projections.

- This Inflation Report was approved by the Board of Directors of BCRP on December 10, 2020.

- The following Inflation Report will be published on Friday, March 19, 2021.

Summary

i. **Global economic activity** has continued to recover, as observed particularly in consumption and employment, which reflects the relaxation of social distancing measures and the application of monetary and fiscal stimuli. In this context, the estimated contraction of global GDP in 2020 has been revised from 5.0 percent forecast in September to 4.9 percent, with prospects of less contraction in the United States and greater growth in China standing out. Despite this, however, the recovery projection for 2021 is revised slightly down, from 5.5 to 5.4 percent, due to the temporary impact that the new COVID-19 outbreak would have. World economic growth would continue to pick up in 2022 with a growth rate of 4.0 percent.

ii. The progress achieved in developing vaccines against COVID-19 and the outlook for economic recovery have led to lower global risk aversion that has driven financial markets and commodity prices. In particular, the price of copper has reached maximum values not observed since 2013. In this context, the projection of the **terms of trade** for 2020 (5.7 percent) and 2021 (5.3 percent) has been revised significantly up from the rates estimated in September, after which the terms of trade are expected to stabilize in 2022 at favorable levels.

iii. The **current account** of the balance of payments would show a surplus of 0.7 percent in 2020 (a deficit of 0.1 percent was projected in September) due to the impact of the contraction of local production on the profits of foreign direct investment companies, the effect of weak domestic demand, and the recovery of the terms of trade. This current account surplus would fall to 0.1 and 0.0 percent of GDP in 2021 and 2022, respectively, in line with the projected reactivation of activity and domestic demand, amid an external scenario with higher terms of trade.

iv. After recording one of the sharpest GDP contractions in the second quarter of the year due to the implementation of some of the strictest social confinement measures in the world, the Peruvian economy has recovered at a faster rate than expected in the third quarter and the leading indicators show a similar evolution in the months of October and November. Since May, the **GDP** has shown lower year-on-year rates of decline due to the easing of the quarantine, the significant expansion of liquidity and credit to the private sector at lower interest rates, and the recovery of public spending, especially in recent months. In addition, there has been an additional boost on activity in the fourth quarter due to the progress of the last phase of the economic reopening of activities, the execution of the second universal bond, and the year-on-year growth of public investment for the first time since the pandemic began.

In this context, there has been less deterioration in the labor market while consumer and business expectations show advances. In addition, exports have been driven by better prospects for global demand and by the resumption of local production.

As a result of this, the GDP in 2020 is now estimated to register a fall of 11.5 percent, a contraction more than one percentage point lower than that estimated in the previous Report (-12.7 percent). This revision is mainly explained by greater activity in the construction sector due to households' higher spending in self-construction projects.

The growth projection for 2021 is also revised up, from 11.0 to 11.5 percent, due to the better external scenario anticipated with quite favorable terms of trade. The recovery of the economy projected for 2021 and the growth forecast for 2022 (4.0 percent) would be supported by the positive effect of the stimulus measures on private spending, expansionary credit conditions, the resumption of investment projects, and the recovery of confidence and employment. The current projection considers a scenario of adequate, flexible, and focused health control measures, if required, without significant rebounds in the COVID-19 contagion rates. An orderly efficient vaccination program of the population is expected in 2021, which would allow economic activity to recover to the pre-pandemic levels by the first quarter of 2022. The baseline scenario also assumes an environment of social and political stability, with which households and businesses' decisions of investment and job creation would not be postponed.

v. **Fiscal policy** measures to face the effects of COVID-19 have continued, in general, in line with what was expected in September, while revenues have shown a faster recovery, both due to lower requests to split tax payments as well as due to the lower contraction of economic activity. With this, and considering the projection of recovery of activity, the fiscal deficit projection is revised down from 9.2 to 8.6 percent of GDP in 2020 and from 5.1 to 4.4 percent in 2021. The process of fiscal consolidation would continue in 2022 with a deficit of 3.0 percent of GDP in a scenario where the effects of COVID-19 on economic activity, on tax collection, and on current spending would have largely dissipated.

vi. Since March, BCRP has taken unprecedented **monetary and financial** measures to support the proper functioning of financial markets in an environment of deep economic contraction. These actions have focused mainly on reducing the cost of financing, providing liquidity to the financial system, and reducing the volatility of long-term interest rates and the exchange rate.

BCRP has maintained since April a minimum historical benchmark interest rate of 0.25 percent, equivalent in November to a negative real rate of 1.37 percent. Given the magnitude of the shock associated with the pandemic, BCRP has been expanding monetary impulse through other monetary policy instruments.

Between September and November, BCRP continued to carry out the necessary actions to sustain the payments system and the flow of credit in the economy. The

balance of liquidity injection operations maintained historical levels, increasing from S/ 60.9 billion at the end of August to S/ 61.5 billion as of November 30, with S/ 50.2 billion of the latter figure being Government-backed repo operations. The total balance of liquidity injection operations (S/ 61.5 billion) is almost eight times higher than the maximum balance of these operations during the 2008-2009 international financial crisis (S/ 7.9 billion) and 2.0 times the balance reached during the period of falling commodity prices (2013-2016) and the de-dollarization program (S/ 31.8 billion).

vii. In line with the expansionary monetary stance, **credit to the private sector** showed a clearly countercyclical behavior with a year-on-year rate of 13.1 percent in October and with higher relative growth rates in medium, small, and micro-enterprises in the context of the Reactiva Peru Program. Therefore, in the forecast horizon, a growth rate of 12.5 percent is projected for 2020, and once the event of exceptional need for financing working capital during the strict quarantine period has been overcome, a more moderate growth rate of credit of 3 percent is projected in 2021 and 2022, in line with an economy in clear recovery. With this, the ratio of credit to the private sector with respect to GDP would increase from 43 percent in 2019 percent to 47 percent in 2022.

viii. Year-on-year **inflation** increased from 1.69 percent in August to 2.14 percent in November, reflecting the increase in the exchange rate, higher costs associated with sanitary control measures, and additional supply factors in some food items. One year-ahead inflation expectations rose from 1.57 percent to 1.68 percent in the same period and all trend inflation indicators remain in the lower part of the target range. In 2021-2022, inflation is projected to be again in the lower part of the target range in a context of moderate imported inflation, a significantly negative output gap (but closing), with lower costs for implementing health control measures being expected at a later stage of the forecast horizon as the pandemic is overcome.

ix. The balance of **inflation risk factors** is more moderate and less skewed to the downside than in the September Report. The risks in the projection include the contingency of a weak recovery in global and local activity if there are significant outbreaks of COVID-19 or difficulties in the availability of vaccines. The baseline scenario assumes a context that favors the recovery of consumer and business confidence, so situations that generate economic uncertainty can delay the economic recovery process.

Moreover, the likelihood that risks linked to COVID-19 could materialize has decreased in the last month due to the progress achieved in the development of vaccines. At the close of this Report, it has been reported that the vaccines developed by Astrazeneca, Moderna, and Pfizer have reached an effectiveness of more than 95 percent.

SUMMARY OF INFLATION REPORT FORECAST

	2019	2020[1/]		2021[1/]		2022[1/]
		IR Sep.20	IR Dec.20	IR Sep.20	IR Dec.20	IR Dec.20
Real % change						
1. Gross Domestic Product	2.2	-12.7	-11.5	11.0	11.5	4.0
2. Domestic demand	2.3	-12.3	-10.7	9.5	10.2	4.1
a. Private consumption	3.0	-10.0	-9.8	8.0	8.8	4.7
b. Public consumption	2.1	6.1	5.4	4.3	5.7	-0.8
c. Fixed private investment	4.0	-28.5	-20.0	20.0	17.5	4.5
d. Public investment	-1.4	-19.0	-18.0	11.0	14.0	4.0
3. Exports (good and services)	0.8	-22.0	-18.8	17.8	15.3	5.1
4. Imports (good and services)	1.2	-21.1	-16.5	11.7	10.1	5.5
5. Global economic growth	2.9	-5.0	-4.9	5.5	5.4	4.0
Memo:						
Output gap[2/] (%)	-0.6	-20.0;-10.0	-18.0;-8.0	-13.0;-3.0	-11.0;-1.0	-9.0;0.0
% change						
6. Inflation	1.9	0.8	2.0	1.0	1.5	1.7
7. Expected inflation[3/]	2.3	1.2	1.5	1.8	1.7	2.0
8. Expected depreciation[3/]	-0.3	3.8	5.9	-1.0	-2.0	-1.0
9. Terms of Trade	-1.8	3.7	5.7	-1.7	5.3	0.1
a. Export prices	-3.4	-1.3	0.4	2.1	9.3	1.0
b. Import prices	-1.7	-4.8	-5.0	3.9	3.8	0.9
% change						
10. Currency in circulation	4.6	25.0	30.0	4.0	4.0	3.0
11. Credit to the private sector	6.9	15.0	12.5	3.0	3.0	3.0
% GDP						
12. Gross fixed investment	22.6	19.0	20.5	20.3	21.3	21.3
13. Current account of the balance of payments	-1.5	-0.1	0.7	-1.6	0.1	0.0
14. Trade Balance	2.9	3.7	3.9	4.3	5.8	5.6
15. Long-term external financing of the private sector[4/]	2.4	-0.5	0.3	-0.6	-1.3	-0.5
16. Current revenue of the general government	19.7	18.0	18.0	18.7	18.8	19.7
17. Non-financial expenditure of the general government	20.1	25.1	24.6	22.2	21.6	21.0
18. Overall balance of the non-financial public sector	-1.6	-9.2	-8.6	-5.1	-4.4	-3.0
19. Balance of total public debt	26.8	34.3	35.1	34.8	34.4	34.4
20. Balance of net public debt	13.0	22.8	22.5	25.6	24.0	25.7

IR: Inflation Report
1/ Forecast.
2/ Differential between GDP and potential GDP (as a percentage of potential GDP).
3/ Survey on expectations to the analysts and financial entities.
4/ Includes net direct investment, portfolio investment and private sector's long term disbursement.

I. External Sector

1. The global economy has continued to recover its pace of growth in recent months, in line with the extraordinary monetary and fiscal stimuli measures applied, as reflected in the recovery of activity in the third quarter. According to various indicators, such as retail sales, foreign trade, and manufacturing and services, this recovery has continued so far in the fourth quarter of the year. In addition, financial markets and commodity prices have also continued to rise due to the better prospects for global recovery and for growth in China, to lower global risk aversion, and more recently, to the progress achieved in the vaccine against COVID-19, and less political uncertainty in the USA.

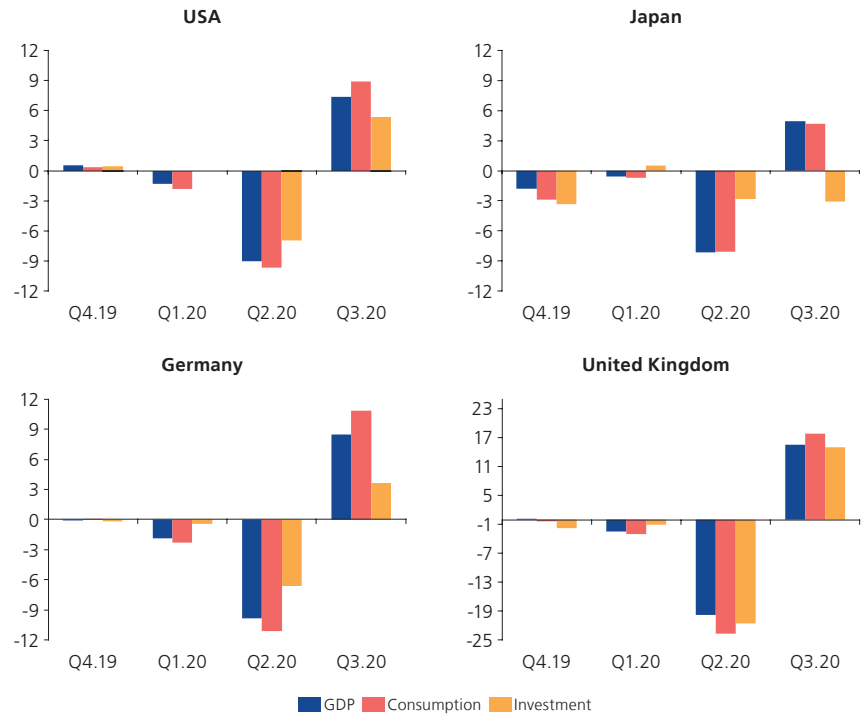
   In this context, the estimated contraction of the global GDP for 2020 is revised from 5.0 percent (September Inflation Report) to 4.9 percent, while the recovery projected for 2021 is revised from 5.5 to 5.4 percent due to the temporary impact that the COVID-19 outbreak would have on economic activity. In 2022 the world economy would continue its recovery path with a growth rate of 4.0 percent.

   In this sense, a longer outbreak of COVID-19 is a risk factor that could affect growth prospects, wheras, on the contrary, the application of the vaccine in a shorter time than expected is an upward factor. The odds that trade tensions between the US and China could escalate have declined significantly after the result of the November election in the United States. The complications in the negotiations between the United Kingdom and the European Union and difficulties to reach an agreement on additional fiscal stimuli in the United States remain as risk factors in this projection.

Recent developments in global economic activity

2. **The significant recovery of the gross domestic product of developed economies in the third quarter of the year partially reversed the unprecedented decline of GDP in the previous quarter**. The recovery in consumption, due to the improvement in employment, the relaxation of restrictions on people's movements, and the application of monetary and fiscal stimuli, was particularly noteworthy.

Graph 1
DEVELOPED ECONOMIES: SPENDING INDICATORS
(Quarterly % change)



Source: OECD.

3. In the **United States**, the GDP grew 33.1 percent (annualized quarterly rate) in the third quarter of 2020, with the recovery in consumption (especially in the services sector) and investment (particularly residential investment) accounting mostly for this rate. The dynamism of the housing sector is explained by the low

mortgage interest rates and by the population's displacement towards areas less exposed to the pandemic.

Table 1
USA: GDP
(Annualized seasonally adjusted % change)

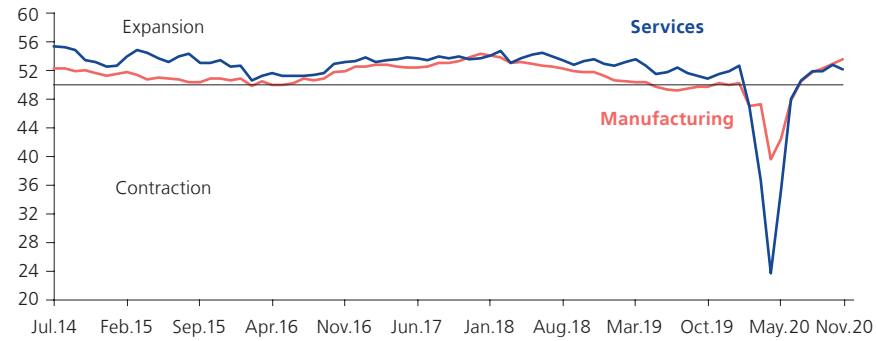
	Q1.19	Q2.19	Q3.19	Q4.19	Q1.20	Q2.20 3rd rev.	Q3.20 1st rev.	Q3.20 2nd rev.
GDP	**2.9**	**1.5**	**2.6**	**2.4**	**-5.0**	**-31.4**	**33.1**	**33.1**
Personal Consumption	1.8	3.7	2.7	1.6	-6.9	-33.2	40.7	40.6
Durable	1.0	12.7	6.3	3.1	-12.5	-1.7	82.2	82.9
Non-Durable	3.3	5.3	3.1	-0.7	7.1	-15.0	28.8	30.6
Services	1.5	1.9	2.0	2.0	-9.8	-41.8	38.4	37.6
Gross Investment	3.9	-5.8	1.8	-3.7	-9.0	-46.6	83.0	84.9
Fixed Investment	2.9	-0.4	2.4	1.0	-1.4	-29.2	28.5	30.4
Non-Residencial	4.2	0.0	1.9	-0.3	-6.7	-27.2	20.3	21.8
Residencial	-1.7	-2.1	4.6	5.8	19.0	-35.6	59.3	62.3
Exports	1.8	-4.5	0.8	3.4	-9.5	-64.4	59.7	60.5
Imports	-2.1	1.7	0.5	-7.5	-15.0	-54.1	91.1	93.1
Government expenditure	2.5	5.0	2.1	2.4	1.3	2.5	-4.5	-4.9
Memo								
Contribution on inventories	0.2	-1.0	-0.1	-0.8	-1.3	-3.5	6.6	6.6

Source: Bureau of Economic Analysis (BEA).

On the other hand, China's growth rate stands out among the **emerging economies**. After the historical fall recorded in the first three months of the year, the GDP recovered for the second consecutive quarter and reached a level 3 percent higher than that registered in the fourth quarter of 2019. In addition to the recovery of consumption and investment, higher growth rates were observed in exports (particularly in exports of medical equipment and technology related to remote work) and public spending. In addition, the **Latin American** economies also showed a positive evolution in the third quarter, continuing with the upward trend observed since May.

4. **Monthly indicators show that this recovery has continued during the fourth quarter**. The manufacturing and services indicators continued to show an upward trend and reached in November their highest levels in three years. However, they have shown a slight deceleration in some economies, particularly in Europe, due to the re-emergence of COVID-19 and the containment measures adopted.

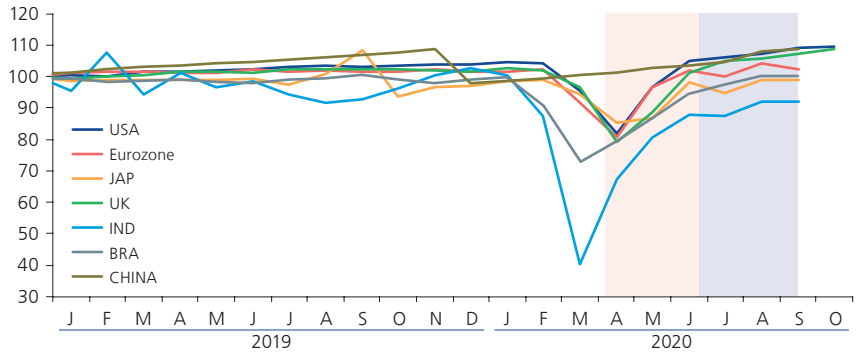
Graph 2
PMI GLOBAL MANUFACTURING AND SERVICES



Source: JPMorgan.

Likewise, other monthly indicators, such as retail sales and industrial production suggest that the recovery continues, although at a more moderate pace. This is the case of retail sales in China, for example, whose upward trend has been sustained throughout the year.

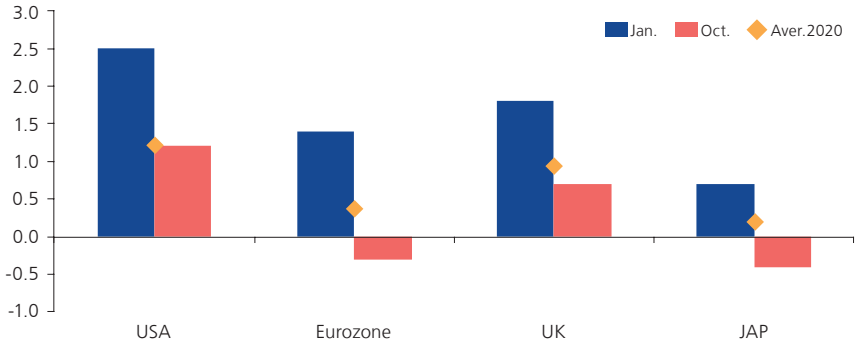
Graph 3
RETAIL SALES
Index, december 2018=100



Source: Investing and Trading Economics.

5. **On the other hand, inflation remains low, reflecting lower aggregate demand and the reversal of some supply shocks caused by the COVID-19 pandemic**. In developed economies, inflation has remained low and even below the targets of their central banks, mainly due to lower energy costs and service prices. This is particularly noteworthy in the Eurozone and Japan, where inflation has been decreasing and has even registered negative rates**.**

Graph 4
DEVELOPED ECONOMIES: INFLATION
(%)



Source: Trading Economics.

This downward trend differs from that observed in several emerging economies where inflation has remained relatively stable or is showing a slight upward trend. The recovery in domestic demand has been partially offset by the reversal of the supply shocks observed at the beginning of the pandemic. In Latin American countries with inflation targeting, the rate of inflation is within the target range or shows slight upward or downward deviations from it.

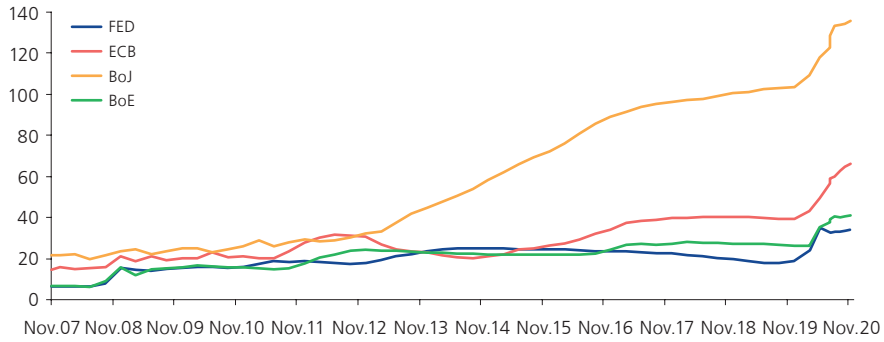
Table 2
LATIN AMERICA: ANNUAL INFLATION

	Brazil	Chile	Colombia	Mexico	Paraguay	Peru	Uruguay
Target Range:	**3.0-5.0**	**2.0-4.0**	**2.0-4.0**	**2.0-4.0**	**2.0-6.0**	**1.0-3.0**	**3.0-7.0**
Dec.18	3.75	2.60	3.18	4.83	3.20	2.19	7.96
Dec.19	4.31	3.00	3.80	2.83	2.81	1.90	8.79
Jan.20	4.19	3.50	3.62	3.24	2.81	1.89	8.71
Feb.20	4.01	3.90	3.72	3.70	2.41	1.90	8.32
Mar.20	3.30	3.70	3.86	3.25	2.50	1.82	9.16
Apr.20	2.40	3.40	3.51	2.15	2.02	1.72	10.86
May.20	1.88	2.80	2.85	2.84	0.67	1.78	11.05
Jun.20	2.13	2.60	2.19	3.33	0.48	1.60	10.36
Jul.20	2.31	2.50	1.97	3.62	1.05	1.86	10.13
Aug.20	2.44	2.40	1.88	4.05	1.63	1.69	9.79
Sep.20	3.14	3.10	1.97	4.01	1.62	1.82	9.92
Oct.20	3.92	3.00	1.75	4.09	1.71	1.72	9.74
Nov.20	n.d.	2.70	1.49	n.d.	2.18	2.14	9.59

Source: Central banks and statistical institutes.

6. **In this context of gradual recovery and controlled inflationary pressures, monetary and fiscal policies have continued to be expansionary**. The central banks of the main developed economies maintained their rates at historic lows and continued with credit support and asset purchase programs.

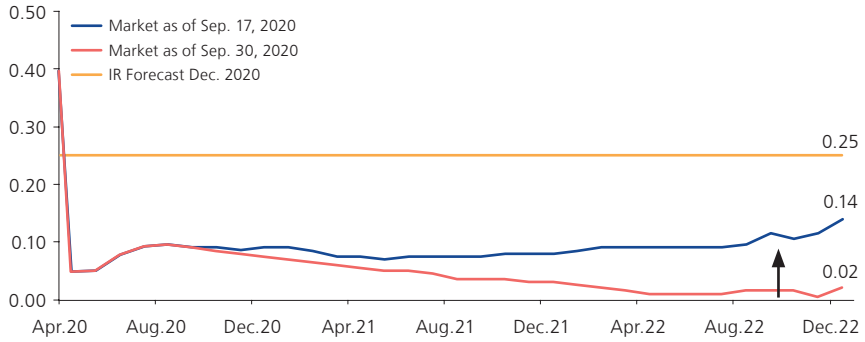
Graph 5
CENTRAL BANKS: TOTAL ASSETS
(% GDP)



Source: Central Banks.

The US Federal Reserve (Fed) decided to maintain its rates at 0-0.25 percent and its balance sheet expansion program through asset purchase programs and credit facilities. At its November 4-5 and December 15-16 meetings, the Fed confirmed that it will maintain an expansionary stance until the new employment and inflation targets are achieved. The Fed's statement mentioned that economic activity continues to recover, but that greater monetary stimuli may be necessary. It also noted that activity would be affected by the outbreak of COVID-19 and that the implications of mass vaccination have yet to be evaluated.

Graph 6
FED RATE PROJECTIONS AND MARKET EXPECTATIONS



Source: Fed, BCRP and Reuters.

As for projections, economic growth for 2020-2022 was revised up (and down for 2023), while the projection of unemployment was lowered for the next 3 years, and the inflation projection or 2021-2022 was revised slightly up.

Table 3
FED PROJECTIONS*

	2020		2021		2022		2023		Long-term	
	Sep.20	Dec.20	Sep.20	Dec.20	Sep.20	Dec.20	Sep.20	Dec.20	Sep.20	Dec.20
Growth	-3.7	-2.4	4.0	4.2	3.0	3.2	2.5	2.4	1.9	1.8
Unemployment rate	7.6	6.7	5.5	5.0	4.6	4.2	4.0	3.7	4.1	4.1
Inflation (PCE)	1.2	1.2	1.7	1.8	1.8	1.9	2.0	2.0	2.0	2.0
Core Inflation (core PCE)	1.5	1.4	1.7	1.8	1.8	1.9	2.0	2.0	-	
Memo: Core PCE excluding food and energy										
Interest rate (%)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2.5	2.5
Range of interest rate (%)	0.1	0.1	0.1	0.1	0.1-0.6	0.1-0.4	0.1-1.4	0.1-1.1	2.0-3.0	2.0-3.0

* Adds 17 data from individual Fed member projections at the end-of-period.
Source: Fed.

Likewise, the ECB has kept its rates at historic low levels and reinforced its monetary policy stimulus through the Pandemic Emergency Purchase Program (€ 1.85 trillion) and the extension of the liquidity facility for banks (Targeted Longer-Term Refinancing Operations-TLTRO). On the other hand, the Bank of England has increased the balance of purchase of government bonds (from £725 to £875 billion) and the Bank of Japan has continued with its bond purchase program, in line with the goal of maintaining zero rates in the long sections of the curve.

In terms of **fiscal policy**, however, there have been some impasses that have delayed the implementation of new stimuli. In the US Congress, members of the Democratic and Republican parties did not approve a new stimulus package due, among other things, to disagreements on the size of the package and on support for state and local governments. Despite this, negotiations were resumed for a possible new package of at least US$ 900 billion in the first week of December. In the European Union, the €750 billion Recovery Fund plan (of which €390 billion is for grants and €360 billion for loans) has been questioned by Hungary and Poland due to the EU's conditioning disbursements of funds to the respect of rule of law.

Global economic outlook

7. **Economic recovery in recent months has led to an upward revision in the global growth projection for 2020**. The estimated contraction of the world economy in 2020 has been revised from 5.0 percent (September Report) to 4.9

percent, this revision being mainly explained by the higher growth forecast for China (up from 1.5 to 1.7 percent) and by a lower contraction foreseen in Latin America (with rates having been revised from -7.9 to -7.7 percent).

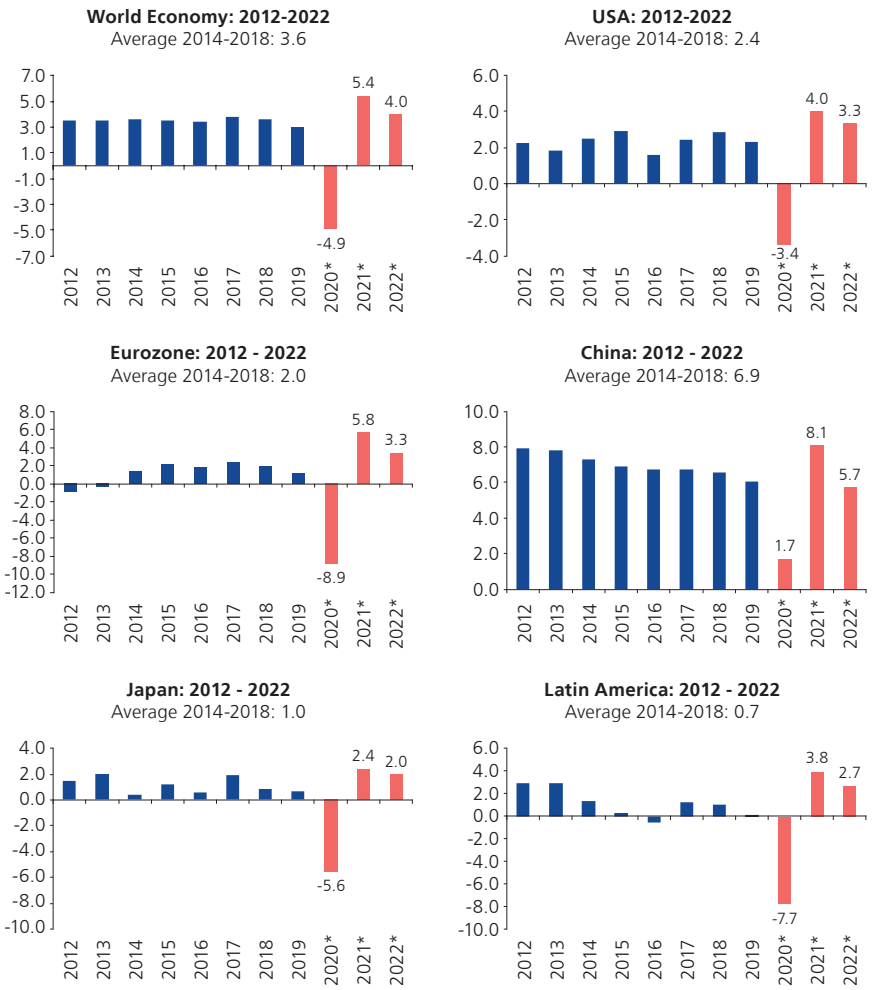
Table 4
GLOBAL GDP GROWTH
(Annual % change)

	PPP	2019	2020*		2021*		2022*
			IR Sep.	IR Dec.	IR Sep.	IR Dec.	IR Dec.
Developed economies	**40.3**	**1.7**	**-6.5**	**-6.4**	**4.7**	**4.6**	**3.1**
Of which							
1. USA	15.1	2.3	-3.7	-3.4	4.0	4.0	3.3
2. Eurozone	11.2	1.2	-8.8	-8.9	6.0	5.8	3.3
3. Japan	4.1	0.7	-6.1	-5.6	2.4	2.4	2.0
4. United Kingdom	2.2	1.4	-10.4	-10.4	6.0	5.7	2.2
5. Canada	1.3	1.6	-6.1	-5.7	4.0	4.0	3.5
6. Others	6.4	1.7	-8.0	-8.1	5.1	4.6	3.1
Developing economies	**59.7**	**3.7**	**-4.0**	**-3.9**	**5.9**	**5.9**	**4.5**
Of which							
1. China	19.3	6.1	1.5	1.7	8.1	8.1	5.7
2. India	8.0	4.2	-10.2	-10.2	10.5	10.5	6.5
3. Russia	3.1	1.3	-6.0	-5.5	3.5	3.2	2.4
4. Latin America and the Caribbean	7.3	0.1	-7.9	-7.7	3.8	3.8	2.7
5. Others	18.2	3.1	-6.2	-6.2	4.2	4.2	4.5
World Economy	**100.0**	**2.9**	**-5.0**	**-4.9**	**5.5**	**5.4**	**4.0**

* Forecast.
Source: IMF and Consensus Forecast.

Despite this, however, the growth projection for 2021 has been revised slightly down after incorporating the impact that the restriction measures adopted following the outbreak of COVID-19 would have, especially in Europe. In Latin America, the recovery in 2021 is limited by the less room for expansionary policies and by the high rates of contagion from COVID-19. A growth rate of 4.0 percent is estimated for 2022 –which is a higher rate than the ones observed in the years prior to the pandemic–, which reflects the gradual recovery of consumption and employment as well as the expansionary monetary and fiscal policies maintained in the main economies.

Graph 7
GDP GROWTH
(Real % change)



* Forecast.
Source: IMF and Consensus Forecast.

Some downside risks to this central projection are similar to the ones pointed out in the September Report.

First of all, there is a risk that the COVID-19 outbreak will extend beyond the first quarter of 2021 and affect economic recovery. This, in turn, not only increases the

probability of defaults by highly indebted companies, but could also compromise fiscal sustainability in countries with high levels of public debt.

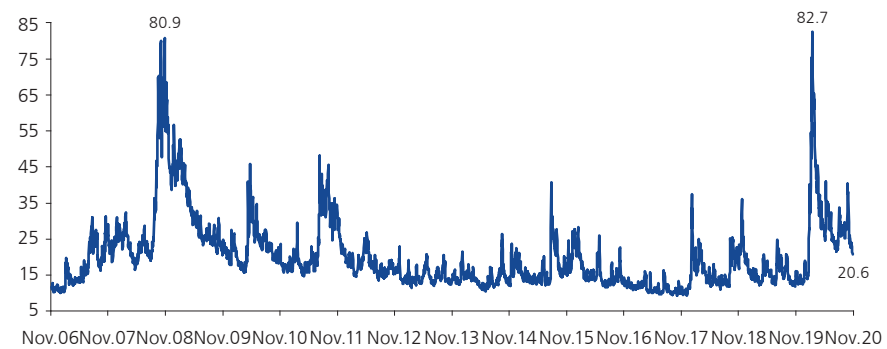
However, the likelihood that this risk will materialize has decreased in the last month due to the progress made in vaccine development. At the close of this Report, the companies Astrazeneca, Moderna, and Pfizer have made significant progress and achieved an effectiveness of more than 95 percent in their vaccines. Moreover, the introduction of a vaccine in the first few months of 2021 could not only reverse the aforementioned outbreak, but could also introduce an element that could skew growth projections to the upside in the future.

On the other hand, the probability of occurrence of some risks mentioned in the September Inflation Report –e.g. the worsening of trade tensions between China and the United States or uncertainty regarding the elections in the United States–has decreased significantly.

International financial markets

8. Financial markets were favored in October and November by factors such as global economic recovery, the maintenance of monetary and fiscal stimuli, the completion of the US electoral process, and the progress made in developing vaccines against COVID-19 (which exceeded initial expectations), all of which determined a significant reduction in risk aversion: in November, the VIX index reached a value of 20.6, its lowest level since February 2020.

Graph 8
VIX INDEX
(Volatility of USA)



Source: Reuters.

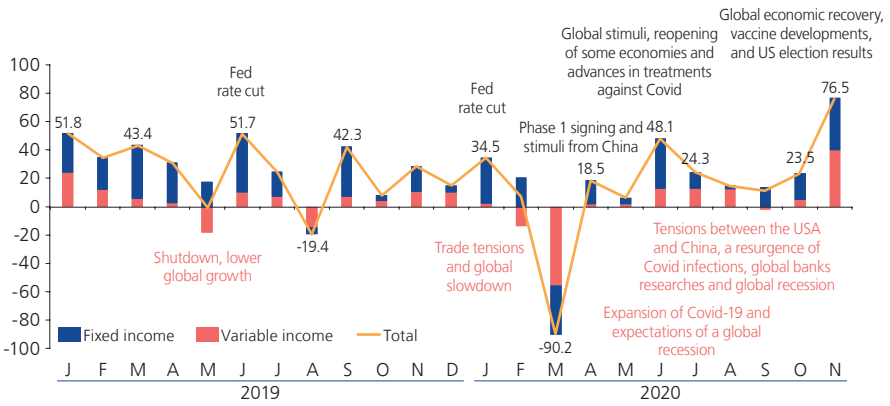
This context of less risk aversion raised the demand for variable-income instruments (stocks) and reduced the demand for assets perceived as safe, such as the dollar, the US Treasuries, and gold, among others. This trend has been offset by the new surge of COVID-19 cases in the US and Europe, which has led to the adoption of new containment measures.

9. Investors' greater risk appetite has also been reflected in capital inflows to the emerging economies. After the abrupt outflow observed in March, there have been net capital inflows since April and there was a significant inflow to the fixed and variable income markets in November. Together with the rise in commodity prices, capital inflows have led to appreciative pressures on the region's currencies.

Graph 9

FLOW OF CAPITAL TO THE EMERGING ECONOMIES

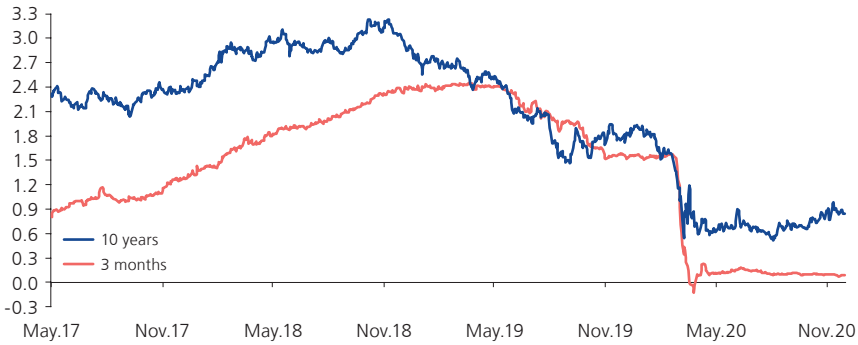
Index, december 2018 = 100



Source: IIF.

10. In **fixed income markets**, the yield on the US 10-year bond increased, in line with greater risk appetite, higher economic activity, and lower political noise. The change in the Fed's monetary policy framework –with a greater tolerance for temporary deviations of Fed rates above their target– have also influenced the lower demand for fixed income securities. In Europe, yields have fallen due to the resurgence of COVID-19 and the new containment measures, as well as due to the maintenance of monetary stimuli and due to the difficulties in the negotiations on the United Kingdom exit from the European Union.

Graph 10
YIELD ON THE US SOVEREIGN BONDS
(2017-2020)



Source: Reuters.

In the emerging economies, the majority of sovereign yields fell in a context of lower interest rates and new local monetary stimuli. However, idiosyncratic shocks that offset this trend were observed in some countries, the rise in Brazil due to uncertainty about fiscal management and the high levels of public debt standing out.

Table 5
YIELDS ON 10-YEAR SOVEREIGN BONDS

	Dec.19	Sep.20	Nov.20	Change Nov./ Sep.2020 (bps.)	Accumulated change 2020 (bps.)
USA	1.92	0.69	0.84	16	-108
Germany	-0.19	-0.52	-0.57	-5	-38
France	0.12	-0.24	-0.33	-8	-44
Italy	1.41	0.87	0.63	-24	-78
Spain	0.46	0.25	0.08	-17	-38
Greece	1.43	1.02	0.63	-39	-80
United Kingdom	0.82	0.23	0.30	8	-51
Japan	-0.02	0.01	0.03	2	5
Brazil	6.79	7.65	7.95	31	117
Colombia	6.34	5.68	5.51	-17	-83
Chile	3.17	2.67	2.79	12	-38
Mexico	6.89	6.11	5.78	-33	-111
Peru	**4.62**	**4.33**	**3.92**	**-41**	**-70**
South Africa	9.02	9.42	8.97	-45	-4
India	6.56	6.01	5.91	-10	-64
Turkey	11.97	12.83	11.91	-92	-6
Russia	6.36	6.25	5.83	-42	-53
China	3.14	3.15	3.27	13	13
South Korea	1.67	1.43	1.66	24	-1
Indonesia	7.04	6.93	6.16	-77	-88
Thailand	1.47	1.32	1.31	-1	-17
Malaysia	3.31	2.68	2.76	9	-55
Philippines	4.53	3.12	2.92	-20	-161

11. In **variable income markets**, stocks rose across the board, continuing the recovery seen in recent months. In some cases, in the US and China for example, the stock markets show gains so far this year. In the United States and Europe, in addition to the improvement in activity, there were better-than-expected corporate profits during the third quarter and stock markets in the US registered all-time highs.

    Stock markets in the emerging economies have also recorded gains, supported by the increase in commodity prices and by domestic stimuli. Despite this, however, most stock indices are below the previous year's levels.

Table 6
STOCK EXCHANGE

		Dec.19	Sep.20	Nov.20	Change Nov./ Sep.2020 (%)	Accumulated change 2020 (%)
VIX*	S&P 500	13.78	26.37	20.57	-5.8	6.8
USA	Dow Jones	28,538	26,502	29,639	11.8	3.9
USA	S&P 500	3,231	3,363	3,622	7.7	12.1
Germany	DAX	13,249	12,761	13,291	4.2	0.3
France	CAC 40	5,978	4,803	5,519	14.9	-7.7
Italy	FTSE MIB	23,506	19,015	22,061	16.0	-6.1
Spain	IBEX 35	9,549	6,717	8,077	20.3	-15.4
Greece	ASE	917	625	737	18.0	-19.6
United Kingdom	FTSE 100	7,542	5,866	6,266	6.8	-16.9
Japan	Nikkei 225	23,657	23,185	26,434	14.0	11.7
Brazil	Ibovespa	115,645	94,603	108,893	15.1	-5.8
Colombia	IGBC	1,662	1,172	1,258	7.3	-24.3
Chile	IGPA	4,670	3,637	4,033	10.9	-13.6
Mexico	IPC	43,541	37,459	41,779	11.5	-4.0
Argentina	Merval	41,671	41,261	54,573	32.3	31.0
Peru	**General Index**	**20,526**	**17,949**	**19,797**	**10.3**	**-3.6**
South Africa	JSE	57,084	54,265	57,092	5.2	0.0
India	CNX Nifty	12,168	11,248	12,969	15.3	6.6
Turkey	XU100	1,144	1,145	1,284	12.1	12.2
Russia	RTS	1,549	1,179	1,282	8.8	-17.2
China	Shangai C.	3,050	3,218	3,392	5.4	11.2
South Korea	KOSPI	2,198	2,328	2,591	11.3	17.9
Indonesia	JCI	6,300	4,870	5,612	15.2	-10.9
Thailand	SET	1,580	1,237	1,408	13.8	-10.9
Malaysia	FTS KLCI	1,589	1,505	1,563	3.8	-1.6
Philippines	Psei	7,815	5,864	6,791	15.8	-13.1

* Data and variation in basis points.

12. In **foreign exchange markets**, lower risk aversion and the Fed's expansionary monetary stance led to a depreciation of the dollar against the basket of the major currencies, the appreciation of the euro (due to expectations of joint fiscal stimuli), the pound sterling (during the periods when there was progress in Brexit negotiations) and the yen (due to increased activity in the country) standing out.

Table 7
EXCHANGE RATES

		Dec.19	Sep.20	Nov.20	Change Nov./ Sep.2020 (%)*	Accumulated change 2020(%)*
Dollar Index**	US Dollar Index	96.39	93.89	91.87	-2.1	-4.7
Euro	Euro	1.121	1.172	1.194	1.9	6.5
United Kingdom	Pound sterling	1.326	1.292	1.334	3.3	0.6
Japan	Yen	108.61	105.45	104.29	-1.1	-4.0
Brazil	Real	4.019	5.611	5.332	-5.0	32.7
Colombia	Peso	3285	3825	3594	-6.0	9.4
Chile	Peso	752	785	761	-3.1	1.2
Mexico	Peso	18.93	22.10	20.15	-8.8	6.5
Argentina	Peso	59.86	76.17	81.30	6.7	35.8
Peru	**Sol**	**3.315**	**3.600**	**3.608**	**0.2**	**8.8**
South Africa	Rand	13.99	16.73	15.44	-7.7	10.3
India	Ruppe	71.35	73.56	73.99	0.6	3.7
Turkey	Lira	5.95	7.72	7.82	1.4	31.6
Russia	Ruble	61.92	77.53	76.33	-1.5	23.3
China	Yuan (onshore)	6.962	6.790	6.576	-3.1	-5.5
South Korea	Won	1154	1165	1110	-4.7	-3.9
Indonesia	Rupee	13880	14840	14090	-5.1	1.5
Thailand	Bath	29.76	31.60	30.28	-4.2	1.7
Malaysia	Ringgit	4.089	4.153	4.073	-1.9	-0.4
Philippines	Peso	50.65	48.47	48.10	-0.8	-5.0

* An increase (fall) in the index means an appreciation (depreciation) of the US dollar, except in the euro and pound.
** An increase (fall) of the index means an appreciation (depreciation) of the US dollar against currency basket (made up by the euro, yen, the pound, Canadian dollar, Swedish krone and Swiss franc).

Most emerging currencies were favored by the global trend, by higher commodity prices, and by capital inflows, except for the Argentine peso (due to restrictions in the foreign exchange markets and increased inflation) and the Turkish lira (due to political noise).

13. The **prices of most commodities** continued with the upward trend observed in the previous months, in line with the greater-than-expected recovery of activity (in particular in China), the depreciation of the dollar, and supply restrictions in some products.

a. Copper

Maintaining the upward trend pointed out in the September Report, in November the pound of **copper** registered a monthly average price of US$ 3.20, 5 percent higher than in September 2019. Year-to-date, the price of copper accumulates an increase of 16 percent compared to December 2019.

Factors explaining this upward trend in the price of copper include, firstly, the higher demand from China –this country accounting for around 50 percent of global consumption– given increased activity in the manufacturing sector, the rebuilding of inventories, and the ban on imports of recycled copper. The

Chinese demand has also been reinforced by the sustained appreciation of the yuan.

On the supply side, the price of copper was supported by some shocks in the market of copper concentrates associated with the COVID-19 crisis and with environmental regulations, the temporary suspension of refineries in India and Zambia standing out among these shocks.

Table 8

SUPPLY AND DEMAND FOR REFINED COPPER

(Thousand metric tons)

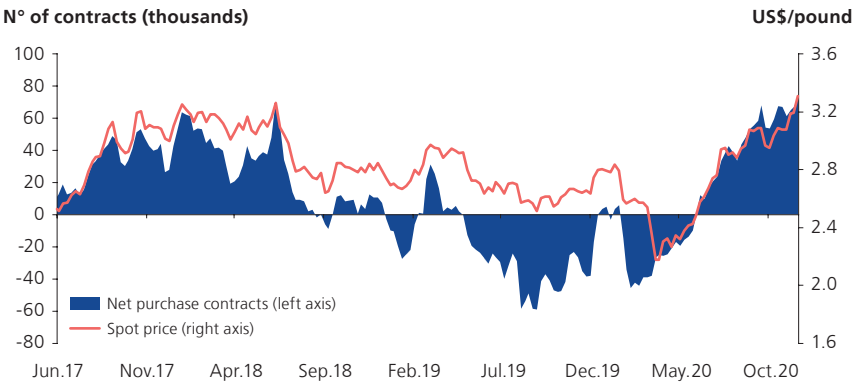
	2016	2017	2018	2019 2/	2020 2/	2021 2/	Jan.-Aug. 2019	Jan.-Aug. 2020	% chg.
Global Mining Production	20,393	20,058	20,565	20,528	20,223	21,151	13,471	13,360	-0.8%
Global Refining Production (Primary + Secondary)	23,356	23,548	24,058	24,047	24,434	24,815	15,893	16,076	1.2%
Global Use of Refined Copper	23,487	23,705	24,484	24,427	24,486	24,745	16,195	16,369	1.1%
Refined Balance 1/	-131	-157	-426	-381	-52	69	-302	-293	

1/ Balance calculated using the total production of refined products minus the use of refining.
2/ ICSG, Report for November 2020 and forecast for October 2020.
Source: The International Copper Study Group (ICSG).

In addition, non-commercial demand continues to be supported by the weakness of the dollar, lower risk aversion, and the increase in global liquidity. Since the last Inflation Report, non-commercial net purchase positions have continued to show the upward trend and register levels close to the all-time highs reached in June 2018.

Graph 11

COPPER: NON-COMERCIAL CONTRACTS

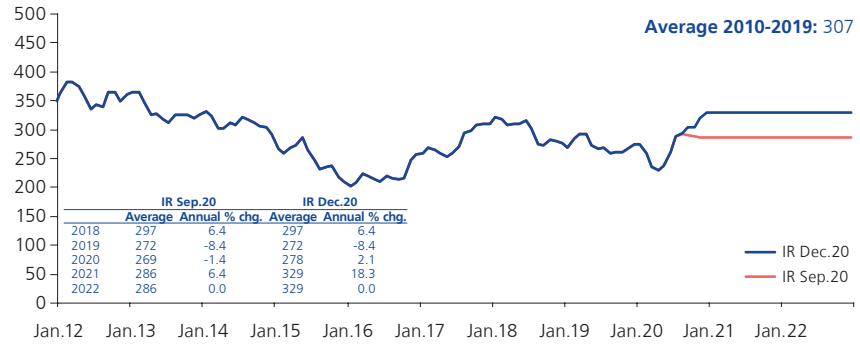


Note: The Copper Speculative Net Positions of the Commodities Futures Trading Commission are reported weekly and reflect the difference between the total volume of the long position (or purchase) and short position (or sale) in the market and opened by non-commercial operators (speculative). This report only includes the future markets in the USA (Chicago and New York Stock Exchanges).

In this context, the price of copper in the forecast horizon is expected to be above the level estimated in the previous Inflation Report. This scenario also assumes

that the higher production associated with investment projects will materialize mostly towards the end of the forecast horizon. However, the evolution of the balance of global supply and demand will depend, among other factors, on global growth, on the evolution of the dollar in international markets (particularly against the yuan), and on policies about importing recycled copper.

Graph 12
COPPER: JANUARY 2012 - DECEMBER 2022
(US$ cents/pd.)



Source: Reuters and BCRP.

b. Zinc

Like the price of copper, the price of **zinc** continued showing the upward trend seen in the previous months. Between September and November, the international price of zinc increased 9 percent, accumulating as a result an increase of 17 percent year-to-date.

The price of zinc was boosted by the recovery of activity in China and in the main developed economies and by the shortage of zinc concentrates that has put downward pressure on refinery margins. Despite the recent slight recovery, inventory levels at the London Metal Exchange (LME) remain at levels not seen since 1990.

Table 9
SUPPLY AND DEMAND FOR REFINED ZINC
(Thousand metric tons)

	2016	2017	2018	2019	2020	2021	Jan.-Sep.		
							2019	2020	% chg.
Global Mining Production	12,668	12,681	12,820	12,894	12,330	13,140	9,557	8,886	-7.0%
Global Refining Production	13,560	13,486	13,102	13,480	13,600	13,988	9,935	9,977	0.4%
Global Use of Refined Zinc	13,665	13,953	13,658	13,707	12,980	13,524	10,132	9,540	-5.8%
Refined Balance (in thousands)	-105	-467	-556	-226	620	463	-197	437	

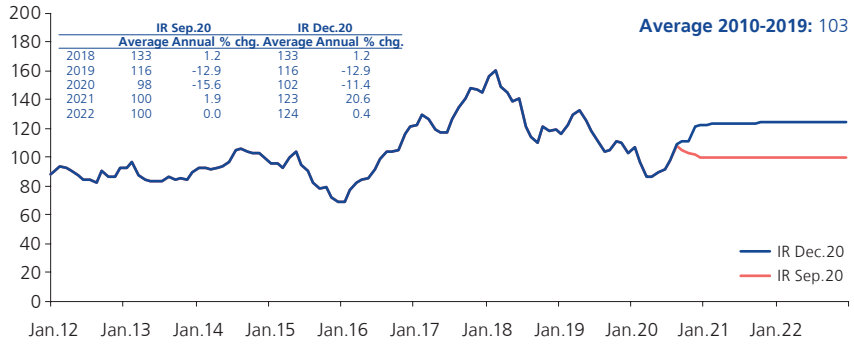
Source: ILZSG, Report for November 2020 and forecast for October 2020.

Considering these aspects, it is estimated that the price of zinc will be above that estimated in the previous Report and that, towards 2022, prices will remain relatively stable. The downside risks to this projection are associated with the anticipated entry of new global mine and refining production capacity, part of which would reflect Chinese smelters' compliance with new government environmental regulations. As a result of this, after four years of deficit, the global market of refined zinc could start to show a supply surplus.

Graph 13

ZINC: JANUARY 2012 - DECEMBER 2022

(US$ cents/pd.)



Source: Reuters and BCRP.

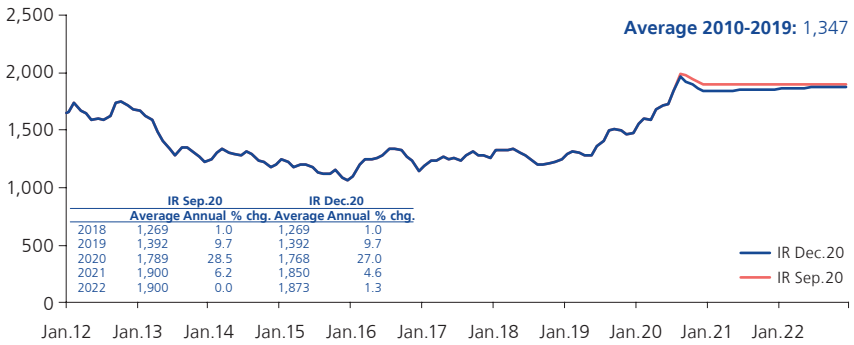
c. Gold

In November, the average price of **gold** (US$ 1,863 a troy ounce) decreased 3 percent compared to September, thus attenuating its previous upward trend. Year-to-date, the price of gold accumulates an increase of 26 percent.

Graph 14

GOLD: JANUARY 2012 - DECEMBER 2022

(US$/tr. ounce)



Source: Reuters and BCRP.

The price of gold fell due to lower demand for this metal as a safe haven asset given the decline of global risk aversion consistent with the progress in the development of vaccines against COVID-19 and the result of the US election.

In line with this recent evolution, the projection of the price of gold is revised slightly down from that estimated in the Inflation Report of September. The main risk factors that could affect this scenario are still the Fed's monetary policy and geopolitical risks, particularly those associated with China and the United States relations and with developments in the Brexit negotiations.

d. Oil

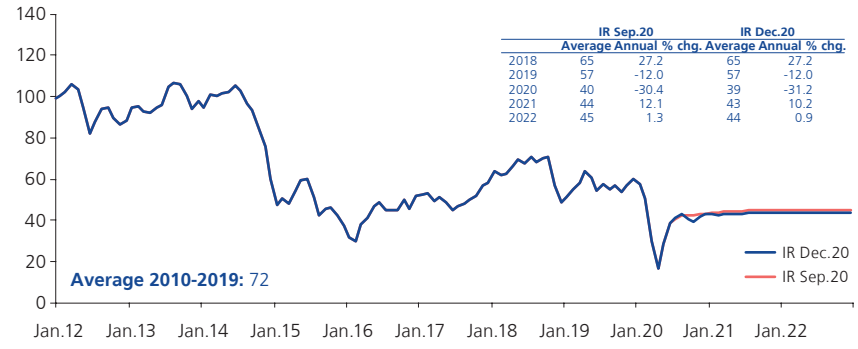
In November 2020, the average price of **WTI oil** increased 4 percent compared to September and reached a monthly average of US$ 41 per barrel. Despite this, however, compared to December 2019, the price of oil registers a 31 percent drop.

The price of crude showed a slight recovery compared to September, in line with the recovery in activity and with the positive developments related to the COVID-19 vaccine, which has improved the outlook for a series of highly fuel-demanding activities (transportation, travel, and other energy-intensive industries). Another element that has added on to these factors is the decision of OPEC+ to increase its production as of January by a lower amount than expected, given the oversupply in the market.

Graph 15

WTI OIL: JANUARY 2012 - DECEMBER 2022

(US$/bl)



Source: Reuters and BCRP.

However, at the time of closing this report, the price of oil has been affected by quarantine measures in various regions of the United States and Europe to contain the recent surge of COVID-19 cases. In addition, the return of Libyan production (which was practically paralyzed since January) has also generated downward pressures.

Therefore, in line with these developments, the oil price projection has been revised slightly down. The main factor of uncertainty in this projection is linked to the evolution of the COVID-19 pandemic. On the one hand, the new surge of contagion cases implies a downward bias in demand, but, on the other hand, the advances in the vaccine could imply an earlier-than-expected normalization of a series of highly energy-demanding activities.

e. Price of grains

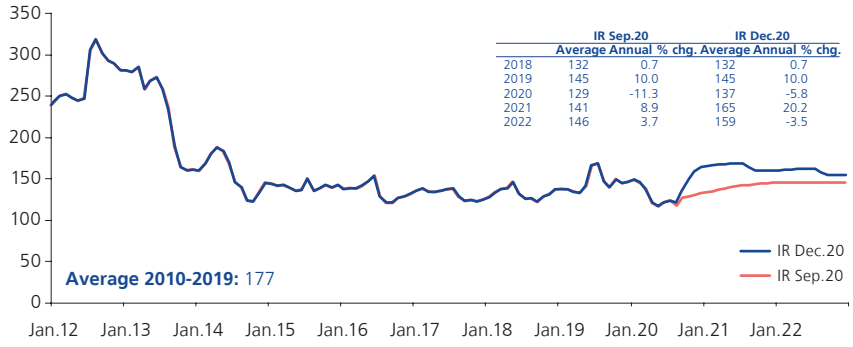
Reversing the fall recorded in the first nine months of the year, the price of **maize** increased 18 percent from September to November. So far in 2020, the price of maize has increased by 9 percent.

The price of maize increased in line with signs of a tighter global market. The USDA estimates that global maize inventories will decline 3.9 percent in the 2020/21 season, recording its fourth consecutive annual decline. The main cause is a higher Chinese demand than that foreseen in the previous report due to the reduction in inventories and the execution of the provisions of the trade agreement with the US (called Phase One Agreement). The bullish trend was reinforced by expectations that the La Niña Event will affect corn cultivation in Brazil and Argentina.

Graph 16

MAIZE: JANUARY 2012 - DECEMBER 2022

(US$/ton)



	IR Sep.20		IR Dec.20	
	Average	Annual % chg.	Average	Annual % chg.
2018	132	0.7	132	0.7
2019	145	10.0	145	10.0
2020	129	-11.3	137	-5.8
2021	141	8.9	165	20.2
2022	146	3.7	159	-3.5

Source: Reuters and BCRP.

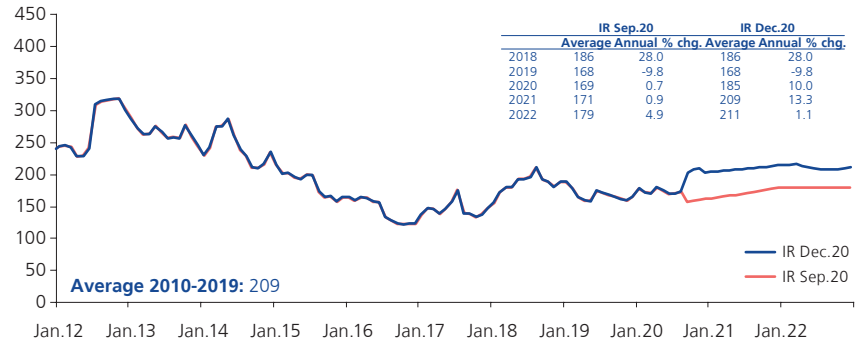
In line with these developments, the projection of the price of maize is revised up with respect to the September Report. A potential risk for this projection is the possible greater intensity of La Niña event, which would affect more severely the maize producing regions of Brazil and Argentina and which, were it to last longer, could also affect maize producing countries in the northern hemisphere. Additionally, there is uncertainty about future compliance with the trade

agreements between China and the US. Another major risk is that a possible stronger outbreak of COVID-19 would keep demand depressed, particularly the demand from the ethanol industry.

The price of **wheat** reached a monthly average level of US$ 211 per ton in November 2020 (4 percent higher than the price of September), with which it accumulates an increase of 27 percent compared to December 2019.

Wheat prices were pushed up by fears that La Niña event will affect winter crop yields in the United States, this factor adding to the fall (to a century's minimum levels) in cultivated areas in the US reported in the September Report. In this context, US inventories are estimated to decline to a six-season low. Moreover, several countries of the European Union recorded the impact of the drought on their crops. At the time of closing this report, this upward trend was offset by the measures adopted against the new surge of COVID-19 cases in Europe and the US. Due to these supply shocks, the projections have been revised up.

Graph 17
WHEAT: JANUARY 2012 - DECEMBER 2022
(US$/ton)



	IR Sep.20		IR Dec.20	
	Average	Annual % chg.	Average	Annual % chg.
2018	186	28.0	186	28.0
2019	168	-9.8	168	-9.8
2020	169	0.7	185	10.0
2021	171	0.9	209	13.3
2022	179	4.9	211	1.1

Source: Reuters and BCRP.

The average price of **soybean oil** increased 11 percent between September and November to US$ 837 a ton. With this, the average price of soybean oil accumulates an increase of 17 percent compared to December 2019.

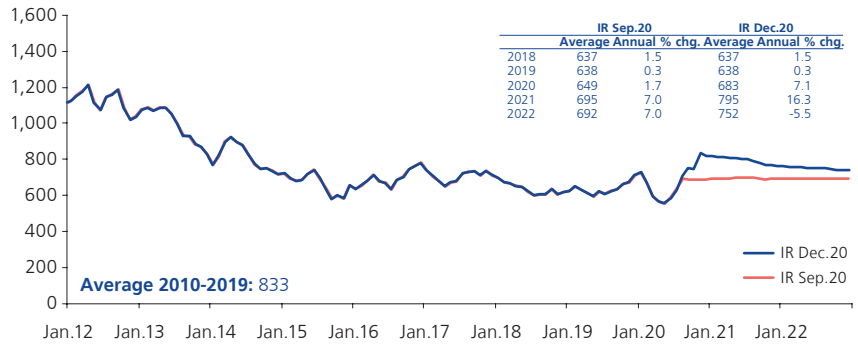
The price of soybean oil increased in response to the reopening of the world economy and to production restrictions in the main exporting countries (particularly Brazil). Another factor contributing to this was the increase in the price of palm oil –a substitute for soybean oil– due to lower production and to the recovery in the price of oil. Considering these recent developments, the

price of soybean oil is projected to be above than estimated in the previous report.

Graph 18

SOYBEAN OIL: JANUARY 2012 - DECEMBER 2022

(US$/ton)



	IR Sep.20		IR Dec.20	
	Average	Annual % chg.	Average	Annual % chg.
2018	637	1.5	637	1.5
2019	638	0.3	638	0.3
2020	649	1.7	683	7.1
2021	695	7.0	795	16.3
2022	692	7.0	752	-5.5

Source: Reuters and BCRP.

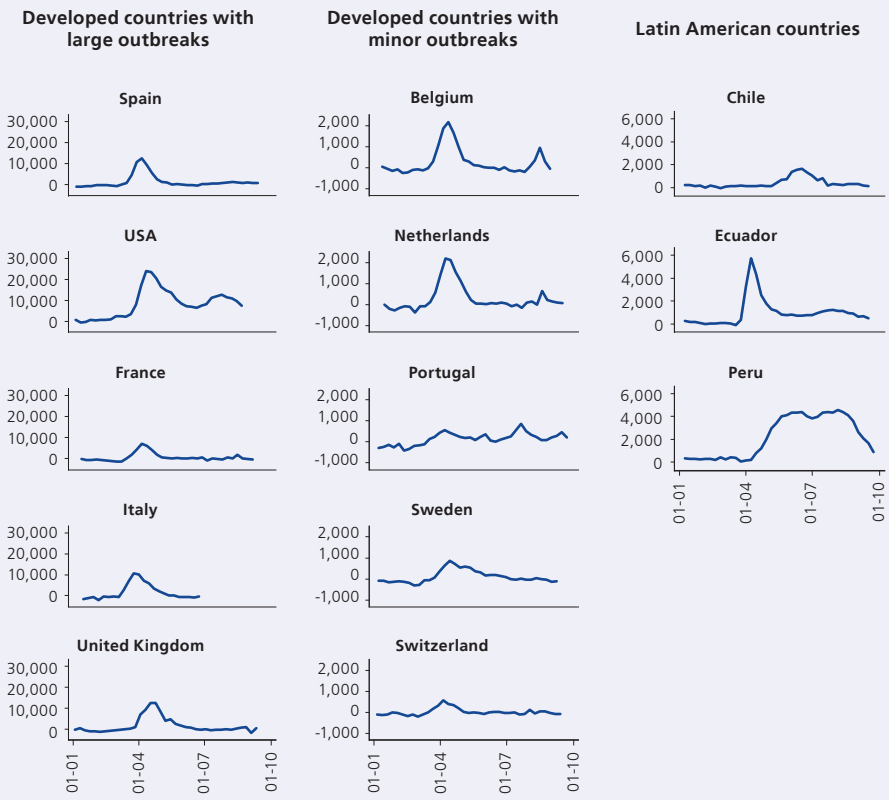
Box 1
SECOND WAVE OF COVID-19 IN THE WORLD: POLICY CHALLENGES IN PERU

The main factors that have led to a second wave of COVID-19 infections in several countries, their characteristics, and the actions taken in response to this new wave of COVID-19 are analyzed herein.

The second wave

A second wave of COVID-19 infections has been observed in various parts of the world, particularly in Europe, since August 2020, and even a third wave is beginning to be reported in other regions, such as the United States, Iran, and some Asian countries. The identification of a second wave of infections in a pandemic is based on the sustained increase in the number of new cases of people infected and deceased, as well as on the saturation or collapse of the health system. For example, the second wave in the 1918 influenza pandemic was even more deadly than the first one.

EXCESS DEATHS IN SELECTED COUNTRIES



Note: Semester data from January 15, 2020.
Source: Financial Times.

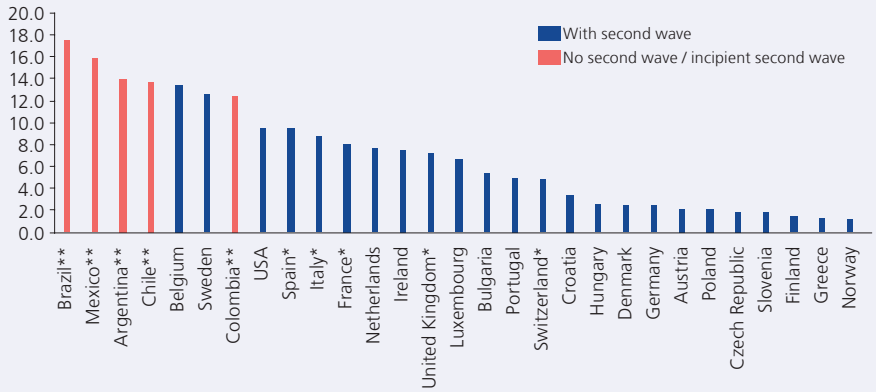
The occurrence of a second wave of a pandemic depends on the number of individuals who are susceptible to contracting the disease; in other words, to the number of people who have not yet been infected. Although there is still no definitive information on the probability of reinfection, experts worldwide say that so far the cases reported are isolated events. Therefore, based on the information available, the susceptible population is considered to be the one that has not yet had the disease.

In Europe, the pandemic was controlled for several months through confinement and restrictions in movement, but minimizing contagion implied maintaining a greater number of susceptible individuals. This is mainly the group among which the second wave of COVID-19 is currently being observed. A key indicator to analyze the evolution of the pandemic is statistics on excess deaths. The graph below shows how after widespread outbreaks in March and April, European countries controlled contagion and in some cases excess deaths returned to pre-pandemic levels. However, due to the relaxation of sanitary measures, part of the susceptible population has been exposed to the virus, which has increased contagion to higher levels than those seen during the first wave of COVID-19.

One way of measuring the percentage of susceptible population is to use the estimates of the population that has already been infected based on the known data on the characteristics of the disease, which provide us with estimates of the population that, in theory, had been infected before the new increase in the number of cases, as shown in the graph below.

ESTIMATES OF THE POPULATION INFECTED BY COVID-19 AT THE BEGINNING OF THE SECOND WAVE IN SELECTED COUNTRIES

(Percentage of the population, as of September 1, 2020)



* For these countries, the estimate of the total number of infected is reported as of August 1, since around this date the number of new cases began to accelerate.
** For Latin American countries without a second wave or with a very incipient wave, the estimated number of infected is reported as of October 1, since the pandemic reached this region later.
Source: https://covid19-projections.com/

Another method to quantify the proportion of the population that has been infected in a given geographic space is to carry out seroprevalence studies. A study of this type involves carrying out statistical samples among the population to apply serological tests, or antibodies tests, which

identify the traces that the virus leaves in the blood. In Peru, the Ministry of Health (MINSA) carried out these studies in different regions of the country during the month of October.

The results show that the estimates of the infected population in the different regions of Peru exceed the estimates of contagion in Europe and the United States before the start of the second wave. According to official sources, 39.5 percent of the population of Lima and Callao have been infected with COVID-19. On the other hand, the estimates contained in "Documento Técnico: Plan de preparación y respuesta ante una posible segunda ola pandémica por COVID-19 en el Perú"[1] indicate that the infected population in Metropolitan Lima reaches 40 percent, while in the regions most affected by the pandemic, like Loreto, the infected population reaches 75 percent. Moreover, the region with the lowest percentage of infected population is Pasco, with 15 percent.

This is important, as immunology experts say that, based on the experience of other types of coronavirus, herd immunity –the level of contagion in which the spread of the virus becomes more difficult because the number of susceptible individuals is significantly low–is achieved when around 60 percent of the population has been infected.

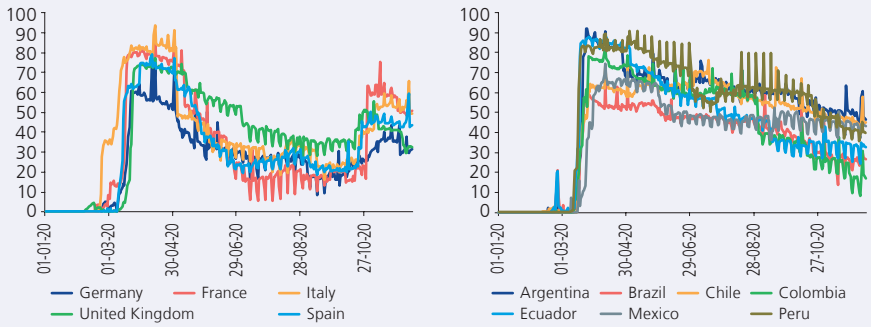
In addition to the number of susceptible individuals, the appearance of a second wave is also influenced by the relaxation of sanitary protection measures and by the speed with which confinement measures are eliminated (resumption of economic activities, resumption of face-to-face classes, among other measures). For example, at the beginning of the pandemic, New York City was one of the great sources of contagion, together with several European cities, such as Madrid. While economic reopening in Madrid led to a rapid reopening of places for leisure activities (bars and restaurants), strong sanitary measures were imposed in New York and the operation of restaurants was restricted, except for restaurants operating outdoors. New York restarted activities indoors later, at the end of September, but only in facilities that had an adequate ventilation, and with a capacity of 25 percent.

Peru adopted one of the strictest mandatory quarantine measures in the world to deal with the pandemic, as reflected in the effective confinement index prepared by Goldman Sachs[2], which indicates that Peru continued with more severe restrictions than Europe and other Latin American countries until October. The second wave of infections in Europe has led to an increase in restrictions in movement in some countries in that region as from November, which is why the effective confinement indicator for countries such as France, Italy, and Spain is now above the index for Peru. However, the level of restrictions in Peru until the beginning of December has remained above the one observed in Europe during the boreal summer, when conditions for the second wave of infections are presumed to have been in place.

1 Ministerial Resolution No. 928-2020-MINSA, published on November 10, 2020.

2 The Goldman Sachs index is an average of the Oxford index (taking into account only 7 measures and replacing the one about international travel restrictions by a contact tracing measurement) and a combination of Google mobility indices. The Oxford index is made up of nine indicators: school closures, workplace closures, cancellation of public events, restrictions on meetings, closure of public transport services, people's confinement in their homes, restrictions on movements within the country, restrictions on international travel, and information campaigns.

GOLDMAN SACHS 'EFFECTIVE LOCKDOWN INDEX'
(Index 0 to 100; 100=more severe)



Responses in countries experiencing a second wave

International evidence shows that measures to control the second wave of COVID-19 infections are similar to those adopted to control the first wave. However, because knowledge about the virus is still scarce, containment policies are heterogeneous, even within the European continent.

Country	Main measures taken during the second wave	Country	Main measures taken during the second wave
Italy	• Mandatory use of masks • Closure of movie theaters, theaters and gyms • Reduction of hours for bars and restaurants • Meetings limited to a maximum number of people	United Kingdom	• New three level alert system (medium, high or very high) • Reduction of hours for bars and restaurants • Mandatory use of masks in certain activities
France	• Night curfew • Mandatory use of masks • Closing of bars, restaurants and non-essential businesses • Meetings limited to a maximum number of people	Portugal	• Mandatory use of masks • Reduction of hours for commercial establishments • Meetings limited to a maximum number of people • Banning college parties
Germany	• Closing of bars and restaurants, leisure activities and any cultural offer • Prohibition of national tourist trips • Meetings limited to a maximum number of people	Belgium	• Use of masks not mandatory, but highly recommended • Reduction of hours for bars and restaurants • Eating is prohibited in street markets • Meetings limited to a maximum number of people
Spain	• Restrictions on the mobility of people • Reduction of hours for bars and restaurants • Meetings limited to a maximum number of people	Netherlands	• Hours reduction for all shops, bars and restaurants • It is not allowed to drink alcohol in public areas after 8:00 p.m. • Promotion of remote work • Meetings limited to a maximum number of people • Mass event ban

It is worth pointing out that re-imposing total or partial quarantines becomes more complicated as the duration of the pandemic extends, not only because of the phenomenon known as "COVID-19 fatigue", but also because quarantines lead to sharp falls in the income of the population. The COVID-19 fatigue is the phenomenon that affects people, who exhausted by the period of confinement and other measures such as the use of masks or disinfectants, become more reluctant to continue maintaining the respective care measures. The second factor is especially important in developing countries, where in addition to the fatigue and the impact on people's mental state, the total paralysis of the economy has implied an increase in poverty and a deterioration in the quality of life of the most vulnerable people.

Therefore, given the strong economic impact that confinement had, a strategy for resuming activities in phases[3] was defined in our country. Some activities not yet authorized could be allowed if people follow protocols focused on capacity and ventilation, such as those implemented in other countries, as long as they do not generate crowds of people in closed places.

The operation of international flights is one of the activities that could be fully resumed, following strict protocols and with a proper follow-up of contacts. Today, international flights are limited to specific destinations with a maximum of 8 flight hours from Lima. Recently, since December 15, flights to 5 additional destinations have been allowed: Amsterdam, Madrid, Barcelona, Paris, and London, although the restriction applies only to the last flight to Peru. Consequently, a person departing from a destination farther away than those currently allowed, but making a stopover in a nearby city and making a connecting flight, could enter the country. So the restriction on flights only limits the supply and does not serve as a barrier to limit the entry of people from destinations that could have higher levels of contagion. For this reason, it is important not only to maintain control of the entry of people into the country, but also to strengthen the follow-up of contacts in order to prevent new waves of contagion with other strains of the virus, especially given the greater arrival of passengers foreseen in the last weeks of the year. According to the Ministry of Transport and Communications (MTC), it is estimated that about 30 thousand passengers coming from Europe will arrive in Peru for Christmas and New Years.

An optimal control of the operation of premises such as restaurants as well as promoting better ventilation mechanisms in them is also important. During October, with the start of Phase 4, the capacity of these premises was allowed to increase to 60 percent and during the extension of this phase, such capacity was differentiated according to the area of the premises (capacity in outdoor areas was increased up to 70 percent). The best international practices advise defining basic ventilation requirements for the internal areas of the premises. Simulations of the dispersion of aerosols or the small droplets that people expel when breathing and that may contain the virus indicate that the probability of contagion decreases significantly when a window is opened if people are wearing masks inside the room.

It is therefore important to encourage the use of restaurants with outdoor service, as was done in New York. In line with this, for example, the Municipality of Metropolitan Lima relaxed its procedures to facilitate the temporary use of public areas in specific streets of the Historic Center of Lima for outdoor service in restaurants and cafes. In addition, it is also necessary to control that premises that operate as bars use using restaurant permits to operate. In New York, for example, customers could not be served alcoholic beverages in restaurants without consuming a main dish, so that people could not avoid the restriction.

Finally, there is still room to simplify and standardize the multiple sector protocols, and to facilitate their implementation and supervision. Considering the advances in the reopening of economic activities, common protocols should focus on social distancing, the use of personal

3 Supreme Decree No. 080-2020-PCM (dated May 2, 2020) defined the strategy for the Resumption of Activities, divided into four phases. The first three phases have already been implemented and the fourth phase is in the process of being implemented.

protective gear (masks and face shields), and the cleaning and ventilation of premises. In addition, a Single Orderly Text (*Texto Único Ordenado* - T.U.O.) of all the regulations implemented in this regard is also needed to facilitate their compliance by the private sector, as well as the supervision of the corresponding entities.

On the other hand, international health experiences show the need for an integrated health system with a national body (MINSA in our case) that plays a leading role in the sector to face upsurges of COVID-19 infections.

The MINSA's Technical Document "Plan de preparación y respuesta ante posible segunda ola pandémica por COVID-19 en el Perú" examine the possible causes that could explain a second wave of COVID in the country. In addition to the aforementioned challenges, the document also includes other possible factors such as insufficient prevention and mitigation measures to reduce the risk of community transmission, the late detection of active cases with limited epidemiological surveillance and investigation and information management, the low level of knowledge of the population and the limited perception of the risk of transmission, the limited supply capacity of health services in the event of an eventual increase in demand, and weak administrative and logistical support for prevention and response.

In this document, the MINSA estimates that a second wave of COVID-19 in the country could cause between 14,000 and 19,000 deaths, depending on the severity of the type of scenario ("mild", "most likely", and "worst"), the estimations having been made based on current knowledge and available data on the pandemic in the country. However, the MINSA specifies that the magnitude of a second wave cannot be accurately determined due to the high uncertainty that exists about the behavior of this pandemic.

To reduce the risk of a further increase in infections, and anticipating the possible mobilization of people for the Christmas and New Year holidays, the Government announced that it will impose restrictions on the traffic of cars on holidays. It is important to note that policy measures should focus on compliance with health protocols focused on carrying out activities in ventilated spaces, rather than on the imposition of strict confinements that mainly affect the most vulnerable sectors.

It should also be pointed out that hospital care capacity has increased significantly since March, but that the number of beds occupied in Intensive Care Units (ICU) for COVID-19 has begun to increase recently. According to the MINSA, as of March 30, 2020, there were 225 ICU beds and 1,451 hospital beds nationwide, while as of December 16 there were 1,469 ICU beds (6.5 times the March level), with an occupancy rate of 73 percent, according to the COVID-19 Situation Room.

In summary, given that the occurrence of a second wave is a possible contingency until we have an effective vaccine option that can be massively provided to the population, it is essential to maintain health policies, to control the operation of economic conditions in accordance with international best practices, and to continue improving the response capacity of the health system.

II. Balance of Payments

Current account

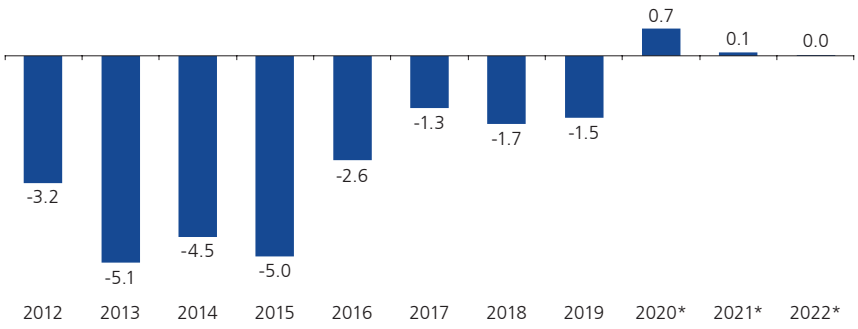
14. As of September 2020, the **current account** of the balance of payments registered a surplus equivalent to 0.2 percent of GDP, a higher balance than that observed in the same period in 2019 (deficit of 2.1 percent of GDP). This improvement reflected mainly the impact of the contraction of local production on the profits of foreign direct investment companies in the country, as well as the effect of weak domestic demand, and the recovery of the terms of trade. In addition to this, there was an extraordinary income (in transfers) associated with the income tax to non-residents as a result of the sale of Luz del Sur shares to the company China Three Gorges Corporation.

15. It is expected that the recovery observed since the third quarter of this year both in the trade surplus and in the factor income deficit will continue in the forecast horizon as a result of the projected reactivation of local activity and domestic demand, in an external scenario of increased terms of trade and recovery of world demand. On the other hand, in contrast, exports of services would register a lower relative recovery due to the more persistent effects of COVID-19 in activities such as restaurants, commerce, and tourism.

    The current account balance in both 2020 and 2021 is revised up compared to what was foreseen in the previous report, mainly due to the evolution observed in September and the higher terms of trade expected in the forecast horizon.

    Under these assumptions, the current account would go from a deficit of 0.1 percent of GDP in the previous report to showing a surplus of 0.7 percent in 2020, declining thereafter to 0.1 percent of GDP (-1.6 percent in the previous Report) and 0.0 percent of GDP in 2021 and 2022, respectively.

Graph 19
CURRENT ACCOUNT: 2012-2022
(% GDP)



* Forecast.

16. On the other hand, this year's **financial account** will reflect the public sector's higher financing requirements to cover the fiscal deficit. With the reversion of expansionary policies in 2021 and 2022, lower disbursements are expected while the preference for our sovereign bonds is expected to continue, amid an external scenario with less uncertainty due to COVID-19 and a domestic scenario of social and political stability.

Table 10
BALANCE OF PAYMENTS
(Million US$)

	2019	2020*			2021*		2022*
		Jan.-Sep.	IR Sep.20	IR Dec.20	IR Sep.20	IR Dec.20	IR Dec.20
I. CURRENT ACCOUNT BALANCE	**-3,531**	**346**	**-154**	**1,349**	**-3,512**	**207**	**37**
% GDP	*-1.5*	*0.2*	*-0.1*	*0.7*	*-1.6*	*0.1*	*0.0*
1. Trade Balance	6,614	4,168	7,368	7,795	9,687	13,253	13,722
a. Exports	47,688	28,568	39,384	42,029	46,720	51,961	54,904
Of which:							
i. Traditional	33,751	19,852	27,892	28,940	33,662	36,901	38,631
ii. Non-Traditional	13,783	8,629	11,339	12,965	12,899	14,969	16,182
b. Imports	-41,074	-24,400	-32,016	-34,234	-37,032	-38,707	-41,183
2. Services	-3,114	-2,871	-3,970	-3,941	-4,080	-4,203	-4,347
3. Investment income	-10,749	-4,077	-7,034	-6,522	-11,740	-12,202	-12,879
4. Current transfers	3,718	3,124	3,482	4,017	2,620	3,358	3,542
Of which: Remittances	3,326	2,078	2,318	2,884	2,274	3,029	3,181
II. FINANCIAL ACCOUNT	**11,726**	**3,692**	**7,254**	**6,651**	**4,437**	**2,218**	**963**
1. Private Sector	7,309	-3,105	-135	-3,855	-1,336	-2,942	-1,267
a. Long-term	5,512	368	-958	659	-1,336	-2,942	-1,267
b. Short-term 1/	1,796	-3,473	823	-4,514	0	0	0
2. Public Sector 2/	4,417	6,797	7,390	10,506	5,773	5,161	2,230
III. CHANGE ON NIRs	**8,195**	**4,038**	**7,100**	**8,000**	**925**	**2,425**	**1,000**

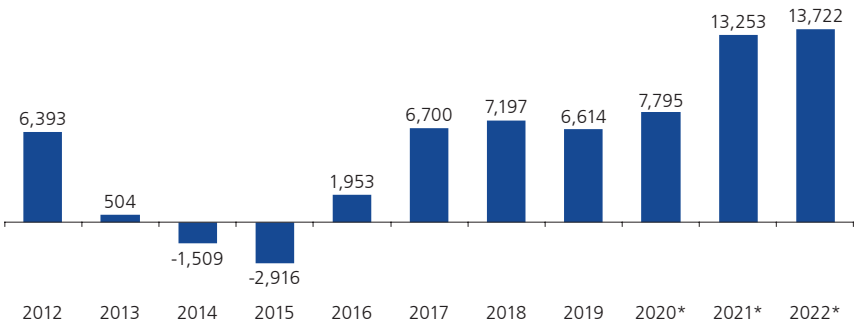
1/ Includes net errors and omissions, and NIR's effect valuation.
2/ Includes portfolio investment in sovereign bonds by non-residents.
IR: Inflation Report.
* Forecast.

17. The surplus registered in the **trade balance** in the first three quarters of the year (US$ 4.17 billion) was US$ 84 million lower than that registered in the same period of 2019 (US$ 4.25 billion) due to the reduction in exports –mainly mining and hydrocarbon exports–, in a context of severe contraction in local production and weak domestic demand.

In the remainder of the year, the trade surplus is expected to continue rising, in part due to the recovery of traditional mining exports, in line with a lower contraction of production in this sector. With this, the trade balance would register a surplus of US$ 7.80 billion in **2020**, a surplus US$ 1.18 billion higher than that observed in the previous year, due to the impact of the contraction of domestic demand on imports.

In **2021**, with the growth in export volumes as a result of the greater mining supply, in line with the expected recovery of activity and domestic demand in a scenario with a more moderate impact of COVID-19, the trade balance surplus would amount to US$ 13.25 billion. With respect to the previous report, the upward revision of the trade surplus reflects the increase in the terms of trade compared to the reduction forecast in September.

Graph 20
TRADE BALANCE
(Million US$)



* Forecast.

18. **Exports** in the January-September 2020 period totaled US$ 28.57 billion, which represented a decline of 18.3 percent compared with the balance registered in the same period of 2019, due to lower volumes of exports from all of the sectors amid a drastic contraction of local production. This decline was particularly

noteworthy in the lower volumes of traditional exports (down 19.2 percent) –especially mining products (copper, gold, zinc), oil and oil derivatives, and fishmeal–, and to a lesser extent, in the lower volumes of non-traditional exports. Mining exports were affected by lower production in the mining sector, while exports of oil and natural gas reflected lower extraction in the northern jungle areas due to social conflicts. While non-traditional exports registered a smaller decline, agriculture was the only subsector to show a slight growth, reflecting a higher fruit production.

The projection of the value of exports in **2020** has been revised up due to the lower reduction expected in export volumes (from -16.4 percent to -12.2 percent), especially in non-traditional exports, in line with the gradual resumption of activities after the implementation of phase 4 of economic reactivation. To a lesser extent, this upward revision is also due to higher export prices –mainly copper and zinc– after the recovery seen in world demand.

In **2021**, the value of exports would recover mainly due to a greater mining supply and a greater external demand in a context of local and global economic reactivation and dynamism of world trade. The upward revision of the previous projection is mainly explained by the greater increase observed in metal prices (copper and zinc).

In line with the evolution of growth in local activity and global demand, the growth rates of exported volumes are projected to normalize by **2022** once the crisis associated with COVID-19 has mostly been overcome.

19. **Imports** totaled US$ 24.4 billion in the first three quarters of the year –20.6 percent less than in the same period in 2019–, in a context marked by a contraction in domestic demand and a significant reduction in the price of oil. The volumes of imports dropped 15.9 percent, mostly due to lower imports of capital goods, inputs, and durable consumer goods as a result of the contraction of domestic investment, employment, and families' income. On the other hand, the price of imports decreased 5.6 percent, reflecting the international reduction in the price of oil (-32.9 percent).

The volumes of imports are expected to show a slower rate of reduction in the rest of the year, reflecting a lower contraction in domestic demand. Therefore, the value of imports projected for **2020** is revised up from -22.1 percent (September Inflation Report) to -16.7 percent.

In line with the expected projection of recovery in domestic demand and oil prices, imports are estimated to grow 13.1 and 6.4 percent annually in **2021** and **2022**, respectively.

Table 11
TRADE BALANCE
(% change)

	2019	2020*			2021*		2022*
		Jan.-Sep.	IR Sep.20	IR Dec.20	IR Sep.20	IR Dec.20	IR Dec.20
1. Value:							
Exports	-2.8	-18.3	-17.4	-11.9	18.6	23.6	5.7
Traditional products	*-5.3*	*-20.2*	*-17.4*	*-14.3*	*20.7*	*27.5*	*4.7*
Non-traditional products	*4.1*	*-13.5*	*-17.7*	*-5.9*	*13.8*	*15.5*	*8.1*
Imports	-1.9	-20.6	-22.1	-16.7	15.7	13.1	6.4
2. Volume:							
Exports	0.7	-16.4	-16.4	-12.2	16.2	13.2	4.7
Traditional products	*-1.2*	*-19.2*	*-17.7*	*-16.4*	*17.3*	*14.1*	*4.4*
Non-traditional products	*5.7*	*-9.4*	*-13.6*	*-1.5*	*11.8*	*11.9*	*5.3*
Imports	-0.2	-15.9	-18.2	-12.2	11.4	8.9	5.5
3. Price:							
Exports	-3.4	-2.3	-1.3	0.4	2.1	9.3	1.0
Traditional products	*-4.1*	*-1.2*	*0.4*	*2.6*	*2.8*	*11.7*	*0.3*
Non-traditional products	*-1.6*	*-4.6*	*-4.7*	*-4.5*	*1.8*	*3.2*	*2.7*
Imports	-1.7	-5.6	-4.8	-5.0	3.9	3.8	0.9

* Forecast.

Terms of Trade

20. The terms of trade registered an increase of 4.0 percent year-on-year as of October because the price of imports showed a greater fall than the price of exports. Despite having reversed its downward trend, the average price of oil continues to be at levels lower than pre-pandemic levels. In contrast, the export prices of the main basic metals have recovered significantly, with copper prices having reached from September maximum highs not observed since 2012 and the price of gold having shown a slight correction after exceeding US$ 1,900 a troy ounce in August.

    This greater than anticipated recovery in the price of copper and other basic metals (e.g. zinc) has implied a revision on the upside of the projection of terms of trade in the forecast horizon. Thus, the terms of trade are expected to practically stabilize in 2022, after growing 5.7 and 5.3 percent in 2020 and 2021 (previous estimates were 3.7 and -1.7 percent, respectively).

    This projection assumes higher average export prices and relatively lower oil prices than those estimated in September. By the end of the forecast horizon, copper would show an average price US$ 3.3 the pound, 15 percent higher than

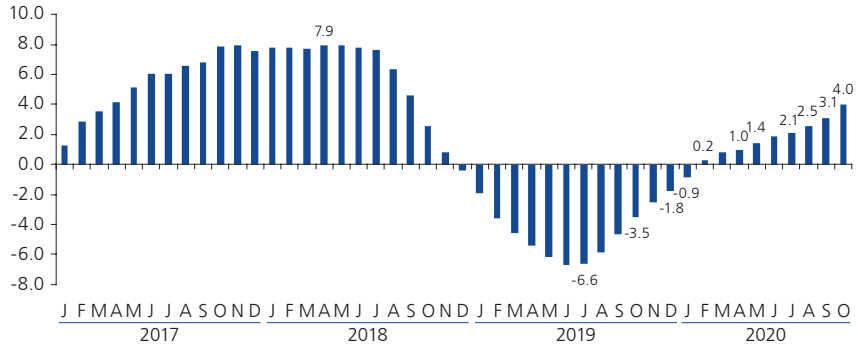
expected in September and 20 percent higher than its average level in 2019. On the other hand, the price of oil would be US$ 44 a barrel (almost 23 percent below its average level of 2019).

Table 12
TERMS OF TRADE: 2019 - 2022

	2019	2020*			2021*		2022*
		Jan.-Sep.	IR Sep.20	IR Dec.20	IR Sep.20	IR Dec.20	IR Dec.20
Terms of Trade							
Annual average % chg.	**-1.8**	**3.4**	**3.7**	**5.7**	**-1.7**	**5.3**	**0.1**
Price of exports							
Annual average % chg.	**-3.4**	**-2.3**	**-1.3**	**0.4**	**2.1**	**9.3**	**1.0**
Copper (US$ cents per pound)	272	265	269	278	286	329	329
Zinc (US$ cents per pound)	116	97	98	102	100	123	124
Lead (US$ cents per pound)	91	82	82	83	84	90	91
Gold (US$ per troy ounce)	1,392	1,735	1,789	1,768	1,900	1,850	1,873
Price of imports							
Annual average % chg.	**-1.7**	**-5.6**	**-4.8**	**-5.0**	**3.9**	**3.8**	**0.9**
Oil (US$ per barrel)	57	38	40	39	44	43	44
Wheat (US$ per ton)	168	200	168	185	171	209	211
Maize (US$ per ton)	145	127	129	137	141	165	159

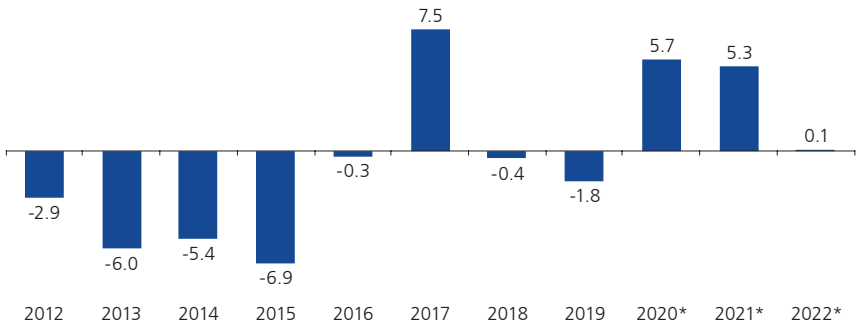
* Forecast.
IR: Inflation Report.

Graph 21
TERMS OF TRADE
(Accumulated 12 month % change)



* Forecast.

Graph 22
TERMS OF TRADE: 2012-2022
(Annual average % change)



* Forecast.

External financing

21. Externally, financial conditions continued to be favorable due to low international interest rates as a result of monetary stimuli in the main developed economies. Despite this, however, uncertainty associated with the COVID-19 crisis and the lower interest rate differential (between developed and emerging economies) have kept capital inflows to emerging economies limited. Since November, optimism about the development of the vaccine and the outcome of the elections in the United States have boosted demand for riskier assets such as those in emerging economies.

    Domestically, investment and activity have contracted significantly due to the impact of the COVID-19 crisis, although a clear reversal of this contraction is observed since the third quarter of the year as a result of fiscal and monetary stimuli and the implementation of the economic reactivation in phases.

22. In this context, the **private financial account** registered a negative flow in the January-September period. Long-term financing was the result of lower foreign direct investment and lower portfolio investment in the country, in line with the reduction in domestic investment and a lower preference for emerging assets, respectively. On the side of external assets, private administrators of pension funds (AFPs) sold external assets to cover the approved withdrawals of their affiliates' funds.

As for short-term capital, the outflow observed in 2020 is consistent with greater uncertainty due to COVID-19, which has implied fewer external lines to banks, and with the better evolution of developed financial markets considering the greater preference for external assets.

Based on this evolution, the projection of private external financing for 2020 and 2021 is revised down, a lower demand for external funding being expected in both years together with a slight reversal of this trend from 2022.

In this context, the net sales of external assets by the AFPs this year would be higher than those estimated in September due to the affiliates' withdrawals of their funds approved in the fourth quarter, this trend reversing progressively thereafter in 2021 and 2022. In addition, the expected recovery of local activity and internal investment in the forecast horizon will imply a faster recovery of foreign direct investment in the country in 2021 and 2022 than that foreseen in the previous report, favored by higher terms of trade as well.

Despite lower global uncertainty due to COVID-19 (the development of the vaccine would offset the risk of a second wave of infections), the lower interest rate differential between emerging and developed economies will imply a slow recovery in portfolio investment in the country. Finally, greater preference for domestic and local currency financing are expected to continue, so long-term net amortizations would remain high in the forecast horizon.

Table 13

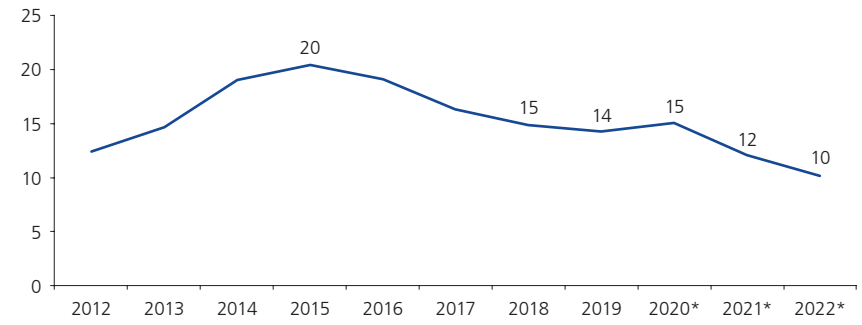
FINANCIAL ACCOUNT OF THE PRIVATE SECTOR

(Million US$)

	2019	2020*			2021*		2022*
		Jan.-Sep.	IR Sep.20	IR Dec.20	IR Sep.20	IR Dec.20	IR Dec.20
PRIVATE SECTOR (A + B)	**7,309**	**-3,105**	**-135**	**-3,855**	**-1,336**	**-2,942**	**-1,267**
% GDP	*3.2*	*-2.2*	*-0.1*	*-1.9*	*-0.6*	*-1.3*	*-0.5*
A. LONG-TERM	**5,512**	**368**	**-958**	**659**	**-1,336**	**-2,942**	**-1,267**
1. ASSETS	**-2,424**	**841**	**12**	**1,440**	**-2,089**	**-2,800**	**-3,736**
2. LIABILITIES	**7,936**	**-472**	**-971**	**-781**	**753**	**-142**	**2,470**
Foreign direct investment in the country	8,892	1,595	2,109	2,061	2,539	2,738	4,909
Long-term loans	-2,224	-2,502	-2,348	-3,100	-2,090	-2,843	-2,939
Portfolio investment	1,268	435	-732	259	304	-37	500
B. SHORT-TERM 1/	**1,796**	**-3,473**	**823**	**-4,514**	**0**	**0**	**0**

1/ Includes net errors and omissions, and NIR's effect valuation.
* Forecast.
IR: Inflation Report.

Graph 23
BALANCE OF MEDIUM- AND LONG-TERM PRIVATE EXTERNAL DEBT: 2012 - 2022
(% GDP)



* Forecast.

23. In the January-September period, the **public financial account** reflected, on the one hand, the greater financing requirements to reverse the impact of the COVID-19 crisis and, on the other hand, the greater preference of external investors for assets in foreign currency and the gradual recovery (since May) in non-residents' demand for our sovereign securities. Because of this, the expansion of international credit lines with the World Bank (US$ 1.83 billion), the issuance of global bonds for US$ 3 billion in April, and non-residents' net purchases of sovereign bonds for a total of US$ 1,998 million stand out in this period.

Table 14
FINANCIAL ACCOUNT OF THE PUBLIC SECTOR
(Million US$)

	2019	2020*			2021*		2022*
		Jan-Sep	IR Sep.20	IR Dec.20	IR Sep.20	IR Dec.20	IR Dec.20
I. Disbursements[1/]	**1,863**	**5,845**	**6,033**	**10,133**	**2,444**	**2,054**	**710**
II. Amortization	**-2,205**	**-794**	**-324**	**-878**	**-551**	**-551**	**-908**
III. Net external assets	**214**	**-134**	**-137**	**-137**	**-140**	**-140**	**-140**
IV. Other transactions with Treasury Bonds (IV = a - b)	**4,545**	**1,880**	**1,818**	**1,387**	**4,019**	**3,797**	**2,567**
a. Sovereign Bonds held by non-residents	4,190	1,998	1,930	1,849	4,019	3,797	2,567
b. Global Bonds held by residents	-355	117	112	462	0	0	0
V. TOTAL (V = I+II+III+IV)	**4,417**	**6,797**	**7,390**	**10,506**	**5,773**	**5,161**	**2,230**

1/ Includes bonds.
* Forecast.
IR: Inflation Report.

Moreover, the issuance of 12-year, 40-year, and over 100-year global bonds for US$ 4 billion and one spread at historical minimum levels stood out at the

end of November, this bond issuance explaining mainly the upward revision of external financing for this year. On the other hand, lower external financing requirements for the public sector are expected in 2021 and 2022, in line with the gradual reversal of the expansionary fiscal policy amid an external scenario of less uncertainty due to COVID-19.

24. The soundness of the balance of payments to face negative external events is reflected in the position of Peru's international reserves relative to the balance of its short term external liabilities or comparing the total of these liabilities with the country's current account deficit. The Peruvian economy shows high-levels in these indicators thanks to the preemptive accumulation of international reserves.

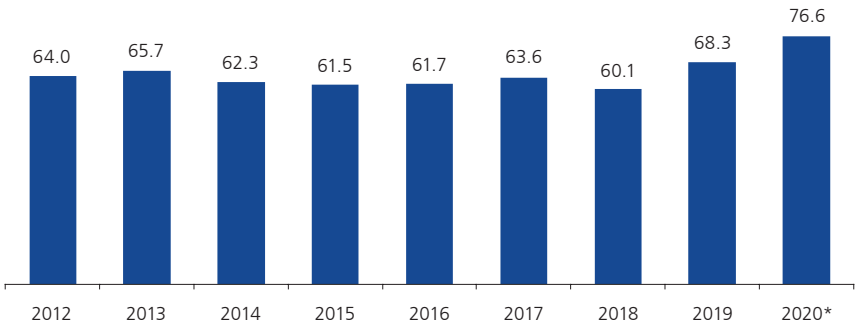
Table 15
NIR INDICATORS

	2017	2018	2019	2020*	2021*	2022*
NIR as a % of:						
a. GDP	29.7	26.7	29.6	37.8	34.6	32.8
b. Short-term external debt 1/	405	347	522	636	608	615
c. Short-term external debt plus current account deficit	344	285	411	716	617	617

1/ Includes short-term debt balance plus redemption (1-year) of private and public sector.
* Forecast.

25. As of December 15, the country's **net international reserves** (NIRs) have increased by US$ 8.27 billion to US$ 76.58 billion compared to the end of 2019, which is mainly explained by the increase in the exchange position of BCRP from US$ 42.62 billion to US$ 58.24 billion.

Graph 24
NET INTERNATIONAL RESERVES: 2012 - 2020
(Billion US$)



* As of December 15.

Box 2
INDEBTEDNESS AND EXTERNAL VULNERABILITY INDICATORS

The sharp drop in activity during the pandemic has generated significant changes in the indebtedness of the main economic agents: government, families, and companies.

Governments have been affected, simultaneously, by lower revenues given the severe contraction in economic activity and by discretionary spending measures. The financing requirements of the public sector in developed economies are estimated to be equivalent to 14 percent of GDP and in the case of emerging economies, to 10 percent of GDP[4]. **Businesses** have resorted to credit facilities to sustain the flow of payments and preserve employment in a context of falling income, while, on the other hand, the drop in **families**' income (as a result of job losses) has been partially offset by government transfers and by a drop in consumption associated with restriction measures and high uncertainty regarding future income. In net terms, the flow of household debt has increased to a lesser extent than companies' debt[5].

Financing sources

The sources of financing for both the private sector and the public sector are mainly credit from the financial system or funding obtained through the issuance of bonds (either in the domestic market or abroad). In Latin America, for example, according to IMF estimates, a significant expansion of credit for businesses is observed together with a contraction in household credit[6]. In the case of the **public sector**, the main source of financing has been the issuance of bonds in international markets.

Debt balances by 2020

Debt flows cause an increase in the balances of private and public debt. IIF estimates for a sample of the major economies indicate that, so far in 2020, the debt has risen from 91 to 104 percent of GDP in the case of companies and from 88 to 104 percent in the case of the public sector, while households' debt has had a smaller increase, rising from 60 to 65 percent, in line with the above-mentioned developments.

The table below shows some debt indicators, measured as a percentage of GDP, in the case of some Latin American countries. Argentina and Brazil register the highest levels of public

4 IMF, World Economic Outlook, October 2020.

5 According to the study authored by Coibion, Gorodnichenko, and Weber (2020), only 42 percent of government transfers have been used for spending.

6 The Regional Economic Outlook for Latin America (October 2020) shows that –in the group made up of Brazil, Chile, Colombia, Mexico and Peru — credit to companies had, as of August, an annual increase of 14.2 percent while credit oriented to families decreased 1.6 percent.

debt, most of which is domestic debt, whereas, on the other hand, the external debt –which comprises the obligations of the public and private sectors with non-residents– is higher in Argentina and Chile. The short-term debt has a relatively low weight in terms of the total external debt in all of the countries.

LATIN AMERICA: DEBT INDICATORS
(Estimated data for 2020, as a percentage of GDP)

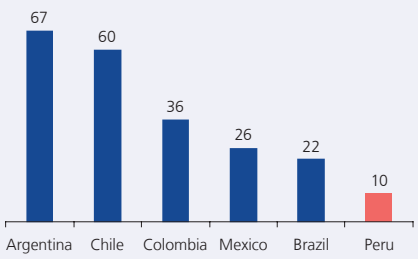
	External Debt					Public Debt		
	Term		Issuer		Total	Domestic	Foreign	Total
	Short	Long	Private	Public				
Argentina	8	74	34	48	82	53	48	101
Brazil	6	40	37	9	46	87	9	96
Colombia	7	51	26	32	58	35	32	67
Chile**	9	83	83	9	92	29	9	38
Mexico	5	40	15	30	45	33	30	63
Peru	4	39	19	24	43	11	24	35

* Corresponds to non-financial companies.
** The composition of public debt (internal and external) is made from the general government.
Source: IMF, JP Morgan, IIF and BCRP.

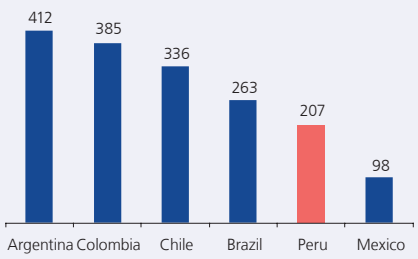
Debt balances and vulnerability indicators

A series of indicators and ratios can be used to assess the extent to which debt balances are consistent with the economic fundamentals. For example, in small open economies, the level of debt in foreign currency is often compared with international liquidity indicators (such as international reserves) or with indicators that reflect the economy's capability to generate foreign currency through exports, for example. The graphs below show these ratios for some Latin American countries. In the case of Peru, we can see, for example, that the balance of the short-term debt is equivalent to a minimum percentage of the central bank's international reserves.

Short-term debt/international reserves
(Estimated data for 2020, in %)



External debt/exports
(Estimated data for 2020, in %)



Source: IIF, JP Morgan, Moodys and BCRP.

III. Economic Activity

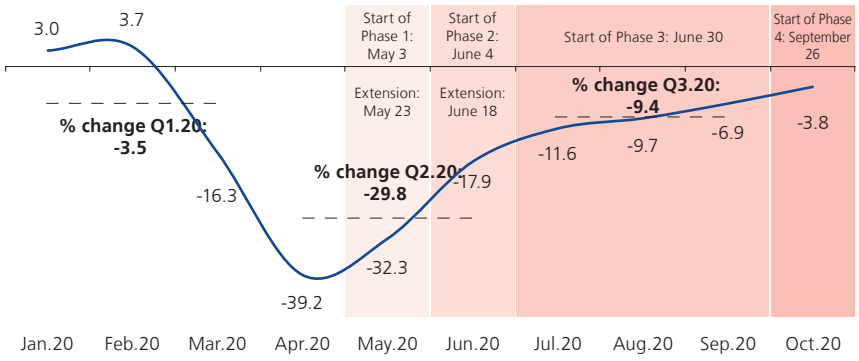
Sector GDP

26. The severe sanitary measures applied to contain the spread of COVID-19 in the country caused the Peruvian economy to register its greatest annual economic contraction in the last 100 years. With the gradual resumption of operations and the implementation of monetary and fiscal stimuli, activity has been moving away from the GDP fall of 39.2 percent registered in April. After the restart of activities included in phases 1 and 2 of the reactivation plan in the first days of May and June, the resumption of other operations included in phase 3 was decreed on the last day of June. The latter included the restart of construction projects in general; the reopening of stores (at 50 percent of their capacity) and restaurants and services (at 40 percent percent of their capacity); shoe repair and leather goods, furniture and home accessories; activities of travel agencies, tour operators and tour guides, and accounting, auditing and business management consultancy services; among others.

    Moreover, after the first part of phase 4 of the reactivation plan was decreed on September 30, the GDP in October registered a fall of 3.8 percent year-on-year, a much lower contraction rate than that recorded in September. Phase 4 increased the capacity of commercial stores to 60 percent and the capacity of restaurants and similar activities to 50 percent; allowed passenger maritime transport services with 50 percent capacity as well as international flights to various destinations, and the restart of the activities of travel agencies and tour operators, museums, cultural centers, zoos and theme parks, as well as the activities of sports clubs and associations, among other activities.

    The countercyclical evolution of credit has been a crucial factor in sustaining the gradual recovery of economic activity. The expansion of credit by BCRP through different monetary instruments has enabled companies to have sufficient liquidity to meet their obligations and finance working capital to resume operations.

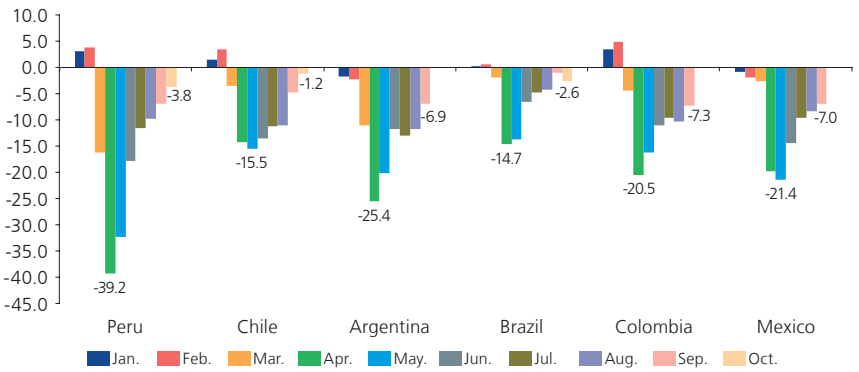
Graph 25
REAL GDP
(Annual % change)



Memo: The beginning of the phases is based on the publication of the corresponding Supreme Decree. Extension refers to the date on which other activities came into operation.

27. Peru's economic contraction has been significantly greater than the contraction experienced by its peers in the region during the current health crisis, this fact being explained mainly by the more severe virus containment measures that were taken in our country: the lockdown paralyzed a greater number of activities and a strict national quarantine confined people at their homes for over 100 days. The lockdown affected directly the employed population, while social immobilization made it difficult for the unemployed to find a job and to reincorporate themselves to the labor force.

Graph 26
LATAM ECONOMIC REACTIVATION, 2020*
(Annual % change)



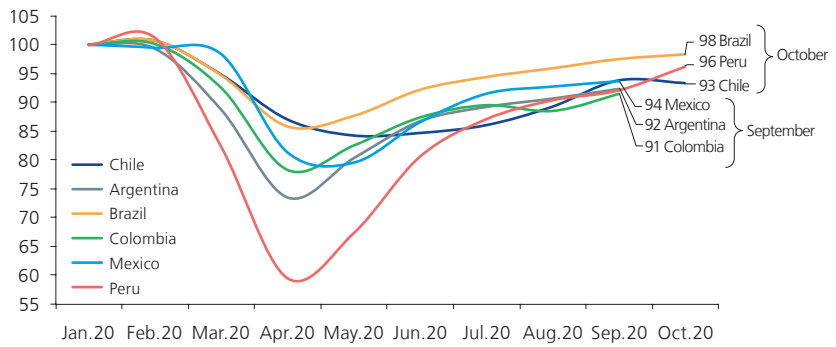
*Data as of October disposable to Peru, Chile, and Brazil.
Source: Central banks and estatistical institutes.

The virus outbreak found our country in a very vulnerable position due to the high degree of informality of the economy, to its weak health system and low

access to water, among other factors. As a result, Peru was among the countries with the highest number of infection cases, despite the strong measures applied to control the spread of the virus.

The resumption of activities as well as the support measures for households and companies have reactivated the economy at a faster rate than that projected in our previous inflation reports. The GDP index in seasonally adjusted terms for October is 4 percent below the pre-pandemic level and has reached similar levels to those observed in other countries in the region.

Graph 27
LATAM ECONOMIC REACTIVATION, 2020
(Seasonally adjusted index activity, monthly % change)

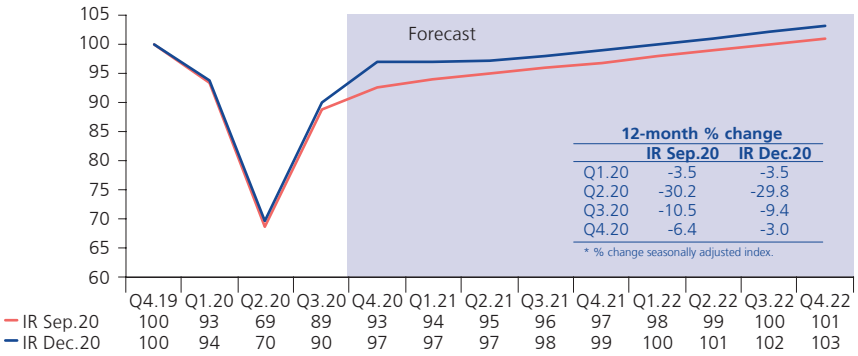


Source: Central banks and estatistical institutes.

28. The contraction of activity is expected to continue to reverse in the remainder of 2020 and in the following 2 years. The expansion of phase 4, decreed on December 6, increases the capacity in shopping centers to 60 percent, the capacity in restaurants and the like to 60 percent in internal areas and 70 percent in outdoor areas, and allows the reopening of cinemas and gyms with a capacity of 40 percent, of theaters in closed spaces with a capacity of 40 percent and in open spaces with a capacity of 60 percent, and the reopening of casinos with a capacity of 40 percent.

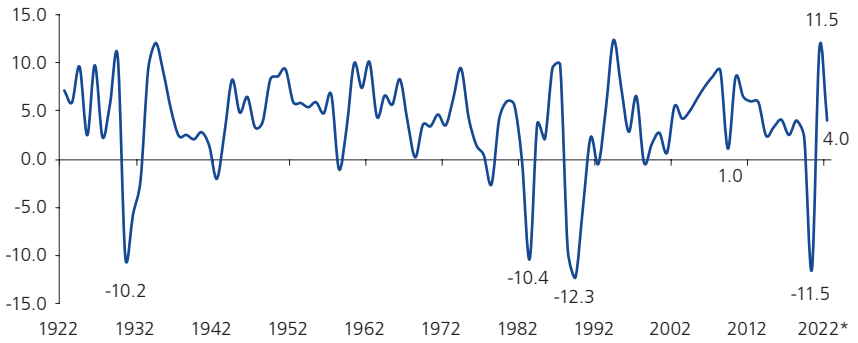
In light of this, it is projected that the GDP in the fourth quarter will show a lower annual reduction than that observed in the previous quarter. Thus, the output would register a contraction of 11.5 percent in 2020 –a lower rate than that projected in the previous Inflation Report– due to the better performance of the sectors of commerce, services, and construction. It is worth pointing out that the contraction projection for 2020 estimates the biggest drop in GDP since 1989 (-12.3 percent).

Graph 28
FORECAST GDP, 2019-2022
(Seasonally adjusted index, Q4.19 = 100)



29. Taking into account the significant improvement in the terms of trade, the growth projection for 2021 is revised up, from 11.0 to 11.5 percent, with a stronger upturn in domestic demand that would boost activity in the sector of services. In the next year, GDP growth would be supported in general by the recovery of both the primary and non-primary sectors, amid a context of political and social stability. This scenario assumes the absence of a second wave of COVID-19 infections of significant impact in the country and the availability of a vaccine in 2021.

Graph 29
TOTAL GDP, 1922-2022
(Annual % change)



* Forecast.

In the forecast horizon, the economy would continue recovering with a growth rate of 4.0 percent in 2022, supported by a context in which macroeconomic

and financial stability are preserved and an adequate business environment is promoted to encourage the recovery of employment and investment. With this rate of recovery, economic activity would return to pre-pandemic levels during the first quarter of 2022, although activities related to tourism would show a more gradual recovery and reach pre-crisis levels in 2023.

Table 16
GDP BY PRODUCTION SECTOR
(Real % change)

	2019	2020*			2021*		2022*
		Jan.-Sep.	IR Sep.20	IR Dec.20	IR Sep.20	IR Dec.20	IR Dec.20
Primary GDP	**-1.2**	**-10.3**	**-7.0**	**-8.0**	**9.6**	**9.5**	**4.6**
Agriculture and livestock	3.4	0.8	1.3	0.7	3.6	2.7	3.0
Fishing	-25.9	-8.8	3.0	3.0	8.5	8.5	4.7
Metallic mining	-0.8	-17.6	-12.5	-14.1	14.4	14.4	4.8
Hydrocarbons	4.6	-10.6	-11.4	-11.1	5.9	6.8	9.0
Based on raw materials	-8.8	-5.6	-1.3	-1.7	7.7	8.0	4.8
Non-Primary GDP	**3.2**	**-15.7**	**-14.4**	**-12.4**	**11.5**	**12.0**	**3.8**
Non-primary industries	1.2	-22.4	-18.5	-17.2	16.9	16.9	2.0
Electricity and water	3.9	-8.2	-6.0	-6.1	12.6	7.9	2.3
Construction	1.5	-28.5	-22.2	-15.6	23.2	17.4	3.8
Commerce	3.0	-20.6	-17.8	-16.2	17.4	18.4	3.3
Services	3.8	-12.3	-12.3	-10.6	8.2	9.5	4.3
GDP	**2.2**	**-14.5**	**-12.7**	**-11.5**	**11.0**	**11.5**	**4.0**

IR: Inflation Report.
* Forecast.

a) Production in the **agricultural sector** grew 0.8 percent in the January - September period due to the better agricultural output obtained in comparison to the previous season. The favorable growth trend observed in the first semester was reversed in the third quarter due to the deficit of rainfall in the northern and central highland areas that affected rainfed crops (potatoes, maize, and rice).

The sector's growth projection in **2020** is revised from 1.3 to 0.7 percent due to a greater drop in agricultural production caused by the water deficit in the northern and central highlands and due to the slowdown in the demand for poultry meat in the context of the pandemic in the third quarter. On the other hand, an increase is expected in production for the external market (blueberries, asparagus and grapes) in the fourth quarter.

Likewise, the growth rate projected for **2021** has been revised from 3.6 to 2.7 percent due to the water deficit foreseen in the August 2020 - July 2021 crop year on the north coast, which will affect the production of this region (rice, lemons, hard yellow maize, and mangos). On the other hand, expectations for the recovery of livestock activity are favorable, with a better scenario foreseen in terms of the pandemic and the reactivation of tourism. The outlook is also positive for the growth of modern export agriculture (blueberries, grapes, and avocados), with high yields in young plantations.

In **2022**, output in this sector would grow 3.0 percent due to the recovery of the production of the north coast after the water deficit of 2021, the boost in the production of poultry meat after the pandemic scenario, and the continuity in the increased agricultural yields of production for external markets (grapes, avocados, and blueberries).

b) Activity in the **fishing** sector registered a year-on-year drop of 8.8 percent from January to September 2020 due to a lower catch of species destined for direct human consumption during the quarantine period. However, the growth rate of 3.0 percent projected in the previous Report for **2020** is maintained due to the announcement of the beginning of the second season of anchovy fishing in the north-central zone with a quota of 2.8 million tons.

Normal climatic conditions and adequate levels of anchovy biomass would allow the sector's output to grow 8.5 and 4.7 percent in **2021** and **2022**, respectively.

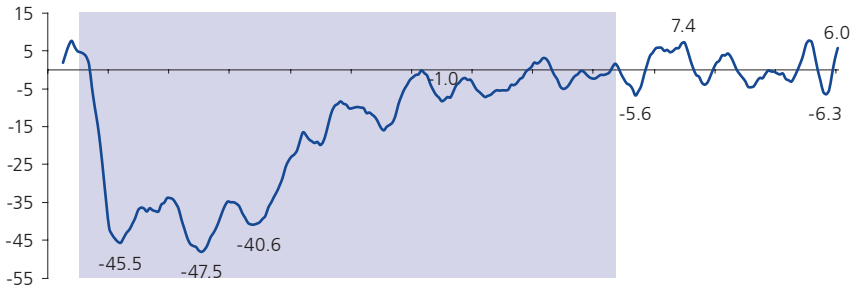
c) Production in the **metal mining** sector fell 17.6 percent in the first three quarters of 2020, although production in the third quarter showed a lower contraction than in the previous quarter. Copper extraction recovered due to higher production from Cerro Verde, Antapaccay, and Antamina, after the latter stopped operations in May, while zinc extraction increased due to the higher production of large and medium-scale mines, especially Antamina and Volcan. Similarly, gold production showed a recovery compared to the previous quarter, due to the greater extraction of large and medium mining units, even though levels close to zero are still observed in artisanal production at the end of October.

The sector's electricity consumption has gradually recovered since April due to the restart of large mining operations within the framework of phase 1 of the economic reopening program. The operations of medium and small formal mining were resumed with Phase 2 in June, while the rest of mining activities were reactivated with Phase 3 in July.

Graph 30

MINING COMPANIES' DAILY ELECTRICITY CONSUMPTION

(% change respect to same comparable day of the previous year)



	1-15 Mar.*	16-31 Mar.*	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
% change	3.3	-39.3	-40.1	-30.2	-11.9	-4.3	-1.5	-0.5	1.1	1.1

* Calculated respect to the comparable days of the previous year.

The sector's production is expected to register an average drop of 14.1 percent in **2020**, which implies a moderate recovery in the last quarter of the year, coupled with the fact that large and medium-sized mining companies have announced lower production plans. The growth rate of 14.4 percent projected for **2021** is explained by the normalization of mining production and the entry into operation of Mina Justa and the expansion of Toromocho. In **2022** the production of the metal mining sector is expected to increase 4.8 percent due to the higher production of Toromocho, Mina Justa, and the entry into operation of the Quellaveco project.

d) Ouput in the **hydrocarbons** sector decreased 10.6 percent year-on-year in January-September 2020. The lower activity of the sector in the third quarter is explained by the reduction in oil production (-40.2 percent) and natural gas (-9.4 percent), offset in part by a higher production of natural gas liquids (1.3 percent). The reduction in oil production is explained by lower extraction in the lots located in Loreto, which paralyzed operations due to the suspension of work on the North Peruvian Pipeline and due to problems with the communities, while the reduction in the production of natural gas is explained by lower extraction in Block 88 due to lower domestic demand.

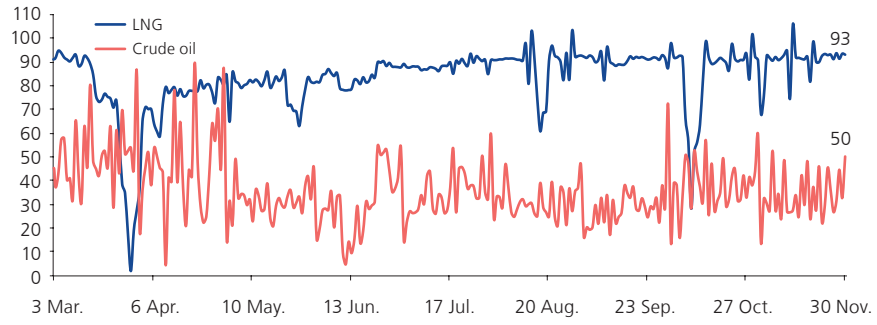
The production of hydrocarbons during the health emergency period has remained well below its normal levels. In April, Petroperú announced the suspension of oil transportation through the North Peruvian Pipeline as of May 1. Oil production in the period between May and October has recorded an average level of 32 thousand barrels per day (a drop of 39.6

percent compared to the same period of the previous year), mainly due to the stoppage of operations in lots 8 , 67, 192, and 95. After resuming operations at the end of September, Lot 95 has been producing an average of 8 thousand barrels per day from then until November 24.

Graph 31

LIQUID HYDROCARBON PRODUCTION

(Thousand of barrels)



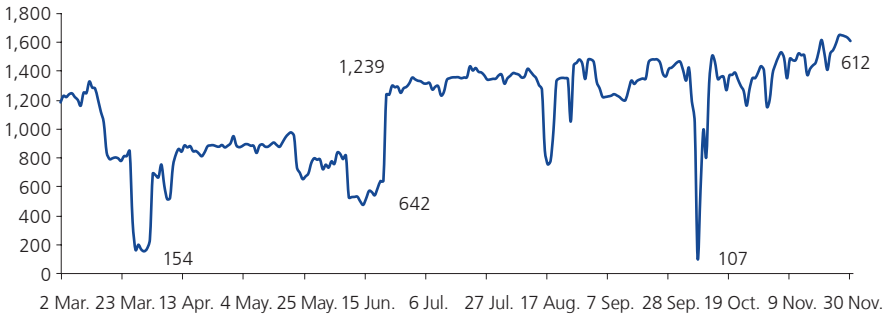
	1-15 Mar.*	16-31 Mar.*	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
LNG (% chg.)	2.9	-38.5	-3.0	-0.8	-3.3	0.6	2.7	0.7	2.6	1.6
Crude oil (% chg.)	-5.4	2.0	-14.8	-44.2	-40.1	-20.9	-44.6	-50.7	-32.5	-47.5

Memo: Calculated with respect to the monthly average of March 2019.

Graph 32

PRODUCTION OF NATURAL GAS

(Milion of cubic feet)



	1-15 Mar.*	16-31 Mar.*	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
% change	3.0	-50.0	-29.4	-22.1	-25.7	0.4	-13.9	-13.7	-11.6	5.1

* Calculated with respect to the monthly average of March 2019.

The production of natural gas and natural gas liquids decreased during the quarantine mainly due to lower activity in lot 88, the production of which is for the domestic market. However, it recovered progressively thereafter and recorded an increase of 5.1 percent year-on-year in November. On the

other hand, the production of natural gas liquids increased 1.6 percent due to higher yields from lot 88. As a result of this, the production of the hydrocarbons subsector is expected to drop 11.1 percent in **2020**, while in **2021**it is expected to grow 6.8 percent due to a recovery in demand compared to the previous year. The sector is expected to grow 9.0 percent in **2022**, due to increased oil production as a result of greater activity in the lots located in Loreto.

e) Activity in the subsector of **primary manufacturing** accumulated an annual fall of 5.6 percent between January and September 2020. The subsector's contraction in the third quarter (3.1 percent) was lower than the contraction of 11.2 percent in the previous quarter due to a higher production of fishmeal and a higher production of frozen and canned fish products. The increase in the former was in line with higher catches of anchovy in the first fishing season in the north-central zone, while the recovery in the latter was associated with an increased catch of horse mackerel and mackerel.

Activity in this subsector would register a reduction of 1.7 percent in **2020** mainly due to lower oil refining. In addition, the increase in the production of both canned and frozen fish products in the third quarter would not fully offset the drop in the previous quarter. In **2021**, the subsector is estimated to grow 8.0 percent, favored by the reopening of the Talara refinery and by the gradual recovery of the branches affected by the lockdown, while in **2022** it is expected to grow 4.8 percent.

f) Output in **non-primary manufacturing** dropped 22.4 percent in January-September 2020. The contraction rate in the third quarter (-12.1 percent) was lower than in the previous quarter (-44.7 percent) due to a smaller decline in the production of mass consumer goods and investment-oriented goods. The positive variations of the branches manufacturing alcoholic beverages, furniture, toiletries and cleaning products, cocoa, and pharmaceutical products stand out among the former, whereas the branches that had strong negative variations in the second quarter and then recovered the production levels they had prior to the pandemic in the third quarter (e.g. the branches manufacturing iron and steel products, paints and varnishes, and cement industries) stand out among the latter.

In **2020** the subsector's production would moderate its fall to 17.2 percent as it is expected to recover in the fourth quarter, with the resumption of other manufacturing activities. This recovery of non-primary manufacturing would continue in **2021** –with a growth rate of 16.9 percent–, although without reaching pre-pandemic growth levels yet. A growth rate of 2.0 percent is projected for **2022**.

g) Activity in the **construction** sector accumulated a fall of 28.5 percent between January and September 2020. In the third quarter, activity decreased 4.9 percent, registering a significantly lower contraction than the 66 percent contraction of the previous quarter. The domestic consumption of cement –the main indicator of the sector's activity– increased 2.3 percent in the third quarter due to the resumption of private construction projects. The progressive recovery of the sector is mainly due to self-construction projects, which in turn is explained by changes in the population's spending habits during the pandemic as families have allocated a greater percentage of their income to home improvements and repairs. Since it is expected that the resumption of activities will continue in the remainder of the year, activity in the construction sector would show a decrease of 15.6 percent in **2020.**

The recovery of the sector is expected to continue in **2021** with a growth rate of 17.4 percent, driven by higher public investment and private investment. In **2022**, it is estimated that activity in the sector will grow 3.8 percent.

h) Activity in the **commerce** sector registered a 20.6 percent drop in the January -September period. Although activity in the third quarter decreased 8.2 percent due to lower wholesale sales and sales of motor vehicles, it showed a recovery compared to the previous quarter due to the implementation of the first 3 phases of the resumption of activities.

Activity in this sector in **2020** would show a 16.2 percent drop due to lower domestic demand as well as to a gradual recovery in vehicle sales driven by the development of e-commerce. On the other hand, in **2021** it would grow 18.4 percent, in line with the gradual recovery in domestic demand, while in **2022** it is expected to grow by 3.3 percent.

i) Activity in the **services** sector fell 12.3 percent year-on-year between January and September 2020. The sector recorded a 10.9 percent contraction in the third quarter, mainly due to the lower dynamism of the subsectors of (i) hotels and accomodation, and restaurants (-61.5 percent), which is considered the most affected branch due to the paralysis of the tourism sector and the high degree of interaction required among people working in this sector, (ii) transportation and storage (-28.4 percent), and (iii) services rendered to companies (-20.9 percent).

The high degree of personal interaction that much of the sector requires will hinder its recovery this year, so it is estimated to register a fall of 10.6

percent in **2020,** this projection taking also into account a longer impact of the pandemic on the branches linked to tourism, such as restaurants and accommodation, in comparison to the other subsectors. The sector would show a recovery with a rate of 9.5 percent in **2021**, while a growth rate of 4.3 percent is expected for **2022**.

Expenditure-side GDP

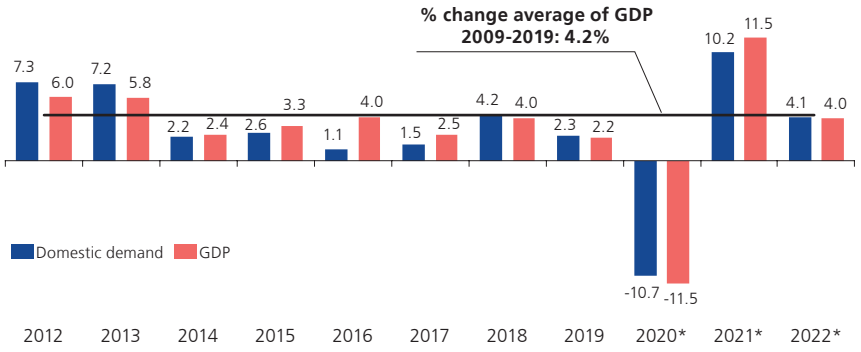
30. Domestic demand between January and September 2020 (-13.5 percent year-on-year) was affected by compulsory confinement, the lockdown, and the increase in uncertainty, which had a negative impact on the labor market and on investors and households' confidence. Exports in this period fell by 22.1 percent due to lower local production and to global recession.

With the smoothing of mandatory confinement and with the exceptional measures taken to avoid a disruption in the flow of payments in the economy, the components of domestic demand saw a gradual reversal since May. In addition, the recovery in world demand, together with lower uncertainty, contributed to reduce the drop in exports. Furthermore, phase 4 of the reactivation plan and its expansion came into effect on October 1 and December 6, respectively, and public investment began to register positive rates for the first time in this period, so it is expected that the drop in GDP in the fourth quarter will moderate to 3.0 percent year-on-year. Thus, this contraction would register a lower rate than in the second and third quarters of the year (-29.8 and -9.4 percent, respectively).

As a result, GDP is projected to record contraction of 11.5 percent in **2020**, a smaller drop than the one estimated in the previous Report (-12.7 percent). This revision is mostly explained by greater investment in construction (self-construction projects) and by a lower contraction in public investment and private consumption. A lower rate of contraction than previously projected is also expected in non-traditional exports due to the better performance of agro-exports and exports of non-primary manufacturing goods. Similarly, the growth projection in **2021** is revised up, from 11.0 to 11.5 percent, due to the better outlook for the terms of trade, which would have a positive impact on private consumption.

In the forecast horizon, GDP would recover supported by the positive effect of stimulus measures on private spending, the resumption of investment projects, the recovery of confidence, and better conditions in the labor market and global demand. Adequate focused health controls without significant outbreaks of infections are considered in the baseline scenario, together with an orderly vaccination schedule in the coming year.

Graph 33
DOMESTIC DEMAND AND GDP: 2012-2022
(Real % change)



* Forecast.

Table 17
DOMESTIC DEMAND AND GDP
(Real % change)

	2019	2020*			2021*		2022*
		Jan.-Sep.	IR Sep.20	IR Dec.20	IR Sep.20	IR Dec.20	IR Dec.20
Domestic demand	**2.3**	**-13.5**	**-12.3**	**-10.7**	**9.5**	**10.2**	**4.1**
Private consumption	3.0	-11.4	-10.0	-9.8	8.0	8.8	4.7
Public consumption	2.1	0.5	6.1	5.4	4.3	5.7	-0.8
Private investment	4.0	-28.0	-28.5	-20.0	20.0	17.5	4.5
Public investment	-1.4	-33.7	-19.0	-18.0	11.0	14.0	4.0
Change on inventories (contribution)	-0.5	0.7	0.0	-0.2	0.0	0.0	0.0
Exports	**0.8**	**-22.1**	**-22.0**	**-18.8**	**17.8**	**15.3**	**5.1**
Imports	**1.2**	**-19.2**	**-21.1**	**-16.5**	**11.7**	**10.1**	**5.5**
GDP	**2.2**	**-14.5**	**-12.7**	**-11.5**	**11.0**	**11.5**	**4.0**
Memo:							
Public expenditure	1.0	-8.6	-1.1	-1.2	5.9	7.7	0.4
Domestic demand excluding inventories	2.9	-14.1	-12.1	-10.3	9.4	10.0	4.0

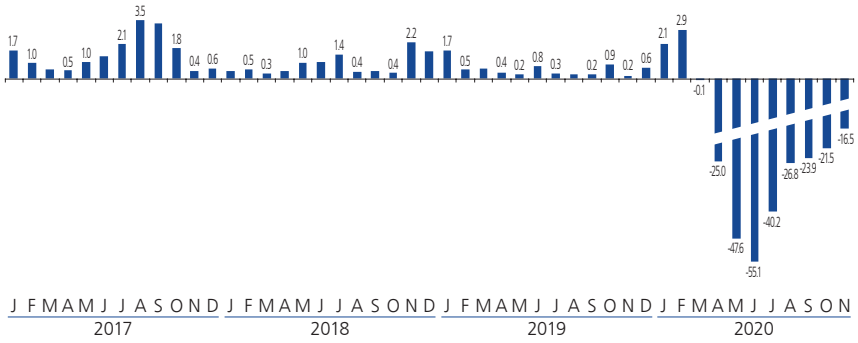
* Forecast.
IR: Inflation Report.

31. The evolution of **private consumption** indicators has been consistent with the gradual reopening of the economy and the easing of quarantine in much of the country. The labor market has partially recovered, in line with the resumption of activities, contributing to the recovery of consumption.

a) In the September-November moving quarter, the employed population inf Metropolitan Lima registered an year-on-year fall of 16.5 percent, this drop

being equivalent to a loss of 800 thousand jobs compared to the same period of the previous year. In line with the gradual reopening of the economy, this rate has declined progressively since June, when the strongest contraction in employment was recorded (-55.1 percent year-on-year).

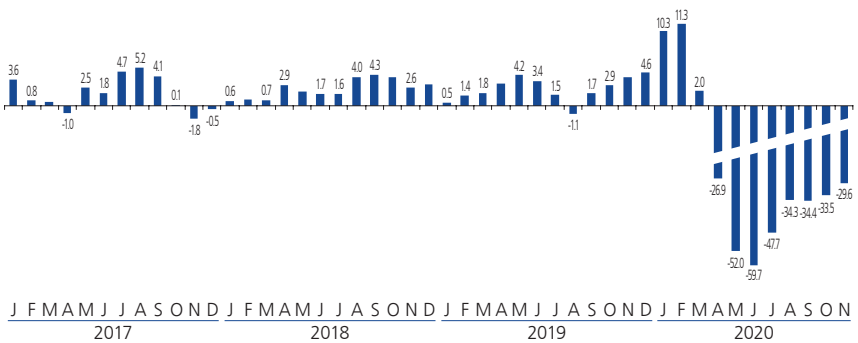
Graph 34
EMPLOYED POPULATION OF METROPOLITAN LIMA, MOVING QUARTER
(Annual % change)



Source: INEI.

b) The drop in employment and income compared to the previous year led the nominal wage mass in Metropolitan Lima to register a 29.6 percent contration in the September-November moving quarter. Like in the case of the employed population, the rate of fall in the wage bill in November has moderated with respect to the sharp contraction observed in June (-59.7 percent year-on-year).

Graph 35
WAGE MASS OF METROPOLITAN LIMA, MOVING QUARTER
(Annual % change)

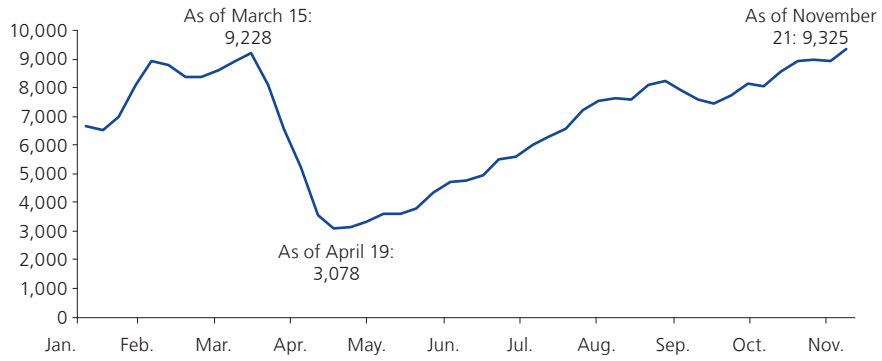


Source: INEI.

c) The number of new affiliates to the private pension system (SPP) –an indicator of the growth of formal employment– has increased gradually

since May after falling to its lowest level in April (3,000 new affiliates). The increase in affiliates as of the third week of November is 5.6 percent higher than in the same period of 2019.

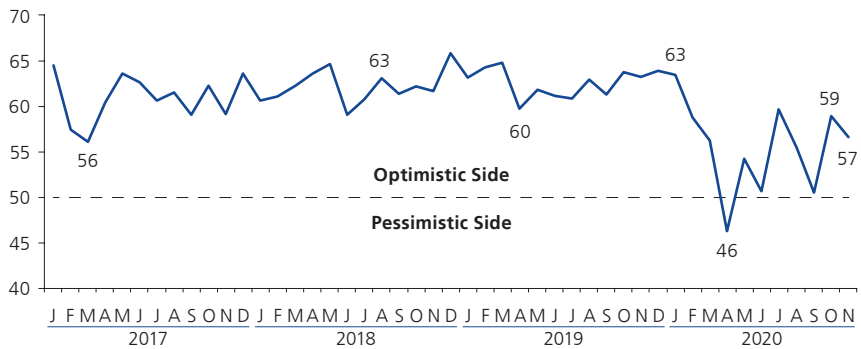
Graph 36
NUMBER OF NEW AFFILIATES TO THE PRIVATE PENSION SYSTEM (SPP)
(Moving average 4 weeks)



* Forecast.

d) Consumer confidence, measured as agents' expectations about their family economic situation for the next 12 months, has remained on optimistic ground since May.

Graph 37
EXPECTATION ABOUT ECONOMIC SITUATION OF THE HOUSEHOLD IN 12 MONTHS, INDICCA METROPOLITAN LIMA
(Diffusion index)

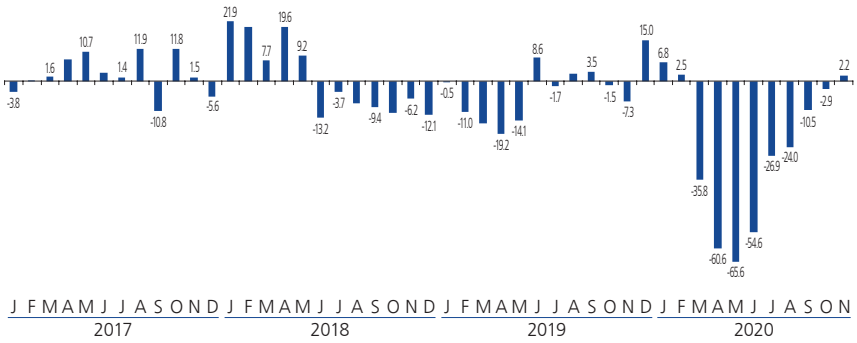


Source: Apoyo.

e) The volume of imports of durable consumer goods increased by 2.2 percent in November after showing nine months of decline. This indicator has had a positive evolution since June, driven by the gradual reopening of

the economy and the smoothing of confinement measures, both of which have increased consumer access to previously restricted goods.

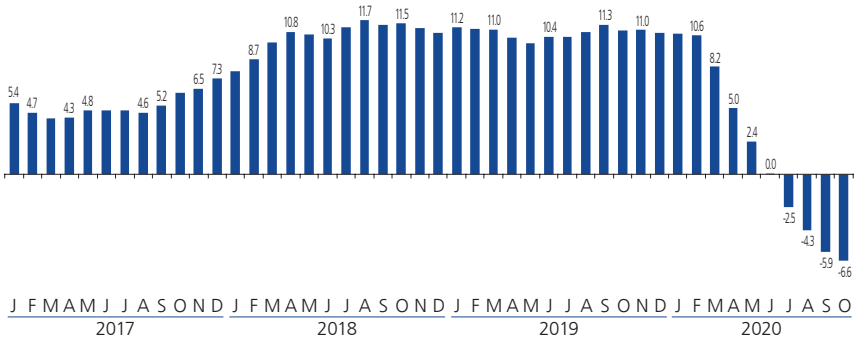
Graph 38
VOLUME OF IMPORTS OF DURABLE CONSUMER GOODS
(Annual % change)



Source: SUNAT – Aduanas.

f) Consumer loans showed a positive monthly growth rate for the first time in October since the pandemic began. In year-on-year terms, real consumer loans have fallen 6.6 percent as of October, which is due to the lower use of credit cards and the reduction in vehicle loans, affected by the change in spending habits during the pandemic and the restriction on the sale of cars during the quarantine, respectively.

Graph 39
REAL CONSUMER LOANS
(Annual % change)



Source: BCRP.

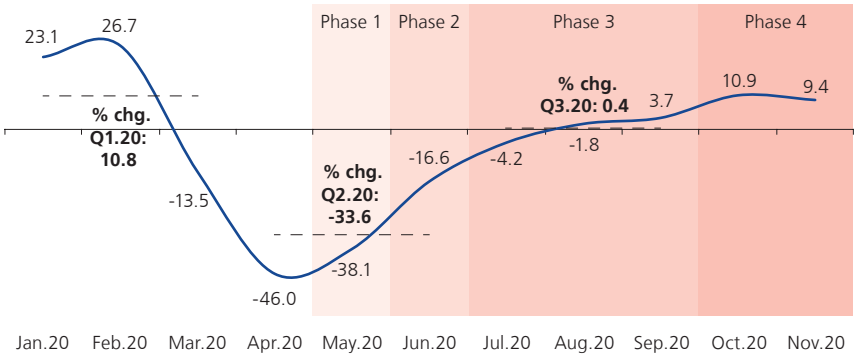
g) The value of electronic receipts in the commerce and services sector in real terms –a high-frequency indicator of private consumption– confirms the reversal in the declining growth trend of this variable. As a result of the

reopening of most sectors, together with the stimuli implemented by the government, sales in the sectors linked to private consumption register positive growth rates since August.

Graph 40

VALUE OF ELECTRONIC RECEIPTS IN THE COMMERCE AND SERVICES SECTOR

(Annual % change)



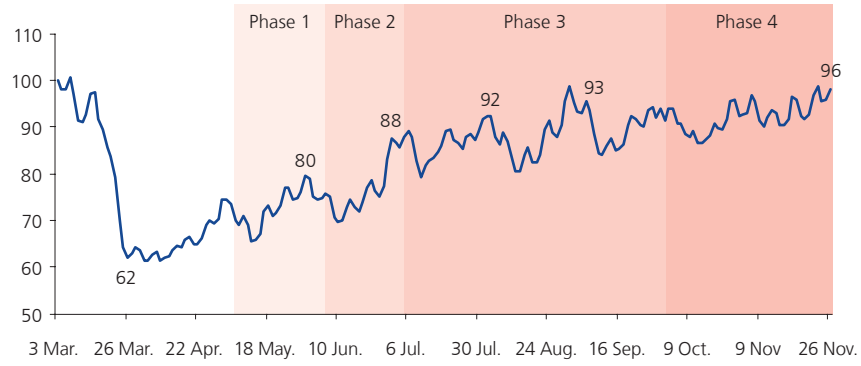
Source: SUNAT.

h) The number of customer transactions carried out through the Real Time Gross Settlement System (RTGS) has continued to recover in recent months due to the smoothing of mobilization restrictions and the reopening of production activities. Despite this, this indicator is still 4 percent below its levels at the beginning of March.

Graph 41

NUMBER OF CUSTOMER TRANSACTIONS IN THE LBTR

(7-day moving average, index 100 = March 3)



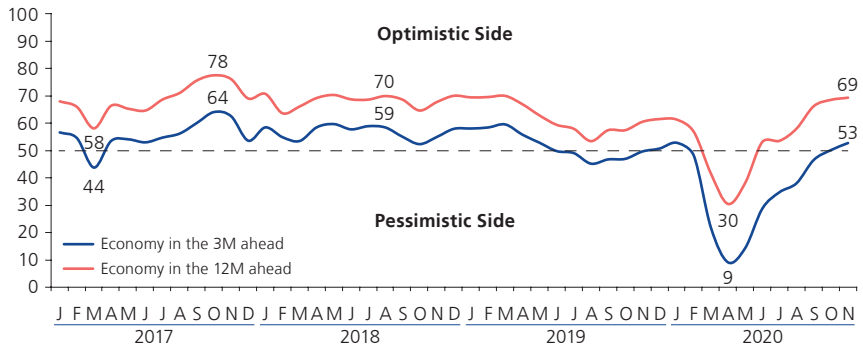
Source: BCRP.

32. Contemporary and leading indicators related to **private investment** also continue to show the reversal observed as from May. The resumption of the

construction projects stipulated in the first three phases of the reactivation plan and the better outlook for global activity have driven to a recovery in business confidence.

a) In a context of economic reopening and favorable prospects for combating the pandemic, businessmen's expectations about the future of the economy have continued to recover. From October, 3-month expectations are once again on the optimistic side, as was observed with 12-month expectations since June.

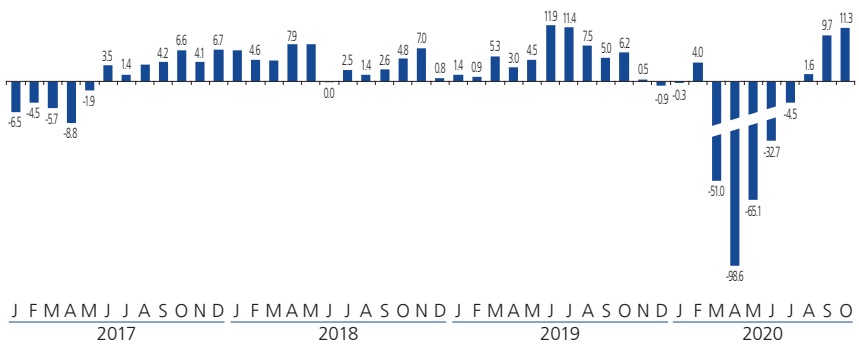
Graph 42
EXPECTATIONS ABOUT THE ECONOMY IN 3 AND 12 MONTHS AHEAD
(Index)



Source: BCRP.

b) The domestic consumption of cement, an indicator of investment in construction, grew in August for the first time since the quarantine began and its growth rate has accelerated thereafter. Thus, in October it showed a growth rate of 11.3 percent, explained in part by families' higher allocation of household expenses to self-construction projects.

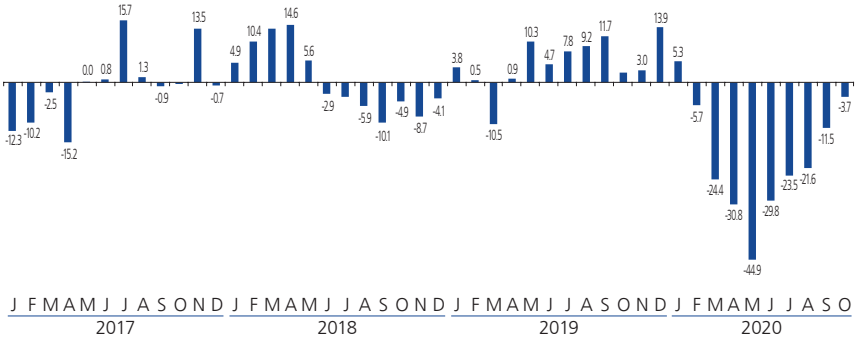
Graph 43
DOMESTIC CONSUMPTION OF CEMENT
(Annual % change)



Source: Cement companies.

c) Imports of capital goods –excluding construction materials and cell phones– have registered a gradual reversal in recent months, in line with the progressive entry into operation of projects that were halted.

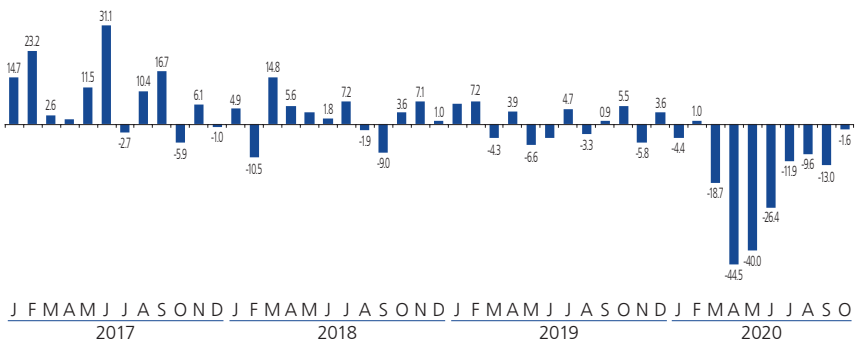
Graph 44
VOLUME OF IMPORTS OF CAPITAL GOODS*
(Annual % change)



* Excluding materials of construction and mobile phones.
Source: SUNAT.

33. The volume of exports in October registered a significantly lower contraction rate than in April (-44.5 percent), driven by the resumption of local production and the recovery of external demand. In the last month, exports of non-traditional goods showed positive growth rates in year-on-year terms, especially in the case of exports of agricultural products such as blueberries and grapes. On the other hand, exports of traditional products continue to show levels below their pre-crisis levels, mainly due to lower exports of hydrocarbons, mining products such as gold and zinc, and fish products, such as fishmeal.

Graph 45
VOLUME OF TOTAL EXPORTS
(Annual % change)



Source: SUNAT.

34. Private sector expectations regarding GDP growth have been updated in line with economic performance in the three quarters of the year. According to the latest **BCRP Survey on Macroeconomic Expectations**, agents project a contraction of between 10.0 and 12.6 percent for this year, a recovery of between 4.0 and 9.0 percent for 2021, and a stable growth rate between 4.0 and 4.5 percent in 2022.

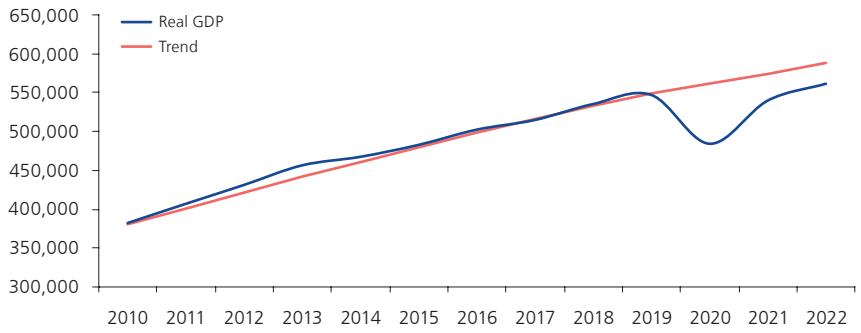
Table 18
MACROECONOMIC EXPECTATIONS SURVEY: GDP GROWTH
(% change)

	IR Dec.19	IR Sep.20	IR Dec.20*
Financial entities			
2020	3.0	-13.0	-12.6
2021	3.3	8.0	9.0
2022	-	-	4.0
Economic analysts			
2020	3.0	-13.0	-12.2
2021	3.5	8.0	9.0
2022	-	-	4.5
Non-financial firms			
2020	3.2	-11.5	-10.0
2021	3.5	3.8	4.0
2022	-	-	4.0

* Survey conducted on November 30.
Source: BCRP.

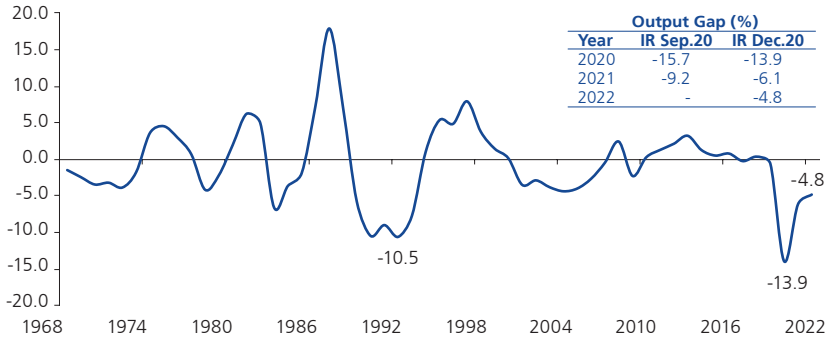
35. The output gap –calculated as the difference between the GDP and its (long-term) trend after the COVID-19 shock, would be negative by around 14 percent in 2020, this rate being its worst historical record. This outcome takes into account the lower accumulation of capital caused by the 20.0 percent drop in private investment and the 18.0 percent drop in public investment, which account respectively for 3.7 and 0.8 percentage points of the GDP contraction in 2020. The 14 percent gap is explained both by demand and supply factors, each representing roughly half of the total. The latter include the lower use of capital in the sectors requiring more human contact, the higher costs of health measures, and lower productivity due to the reallocation of human capital from the sectors affected by the pandemic to other sectors because of the lack of experience and skills workers need for their new jobs. This is mainly observed in non-tradable sectors due to the restrictions on the capacity of the premises intended to prevent crowding, which means that companies' goods and services are not offered in an efficient manner.

Graph 46
REAL GDP AND TREND*
(Millions Soles 2007)



* Long-term trend of GDP is calculated using Hodrick-Prescot filter in annual frecuency.

Graph 47
OUTPUT GAP*
(As a percentage of trend GDP)



Output Gap (%)

Year	IR Sep.20	IR Dec.20
2020	-15.7	-13.9
2021	-9.2	-6.1
2022	-	-4.8

* Long-term trend of GDP is calculated using Hodrick-Prescot filter in annual frecuency.

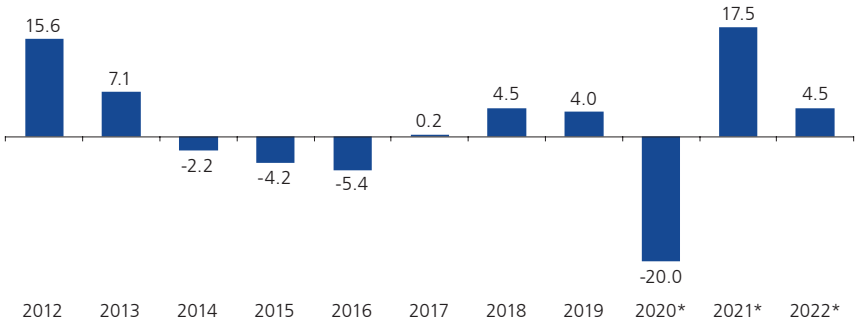
36. **Private consumption** fell 11.4 percent in the first three quarters of the year due to the deterioration of the labor market, to restrictions on the access to some goods and services, and to lower consumer confidence compared to the pre-crisis levels. Household spending is expected to continue to show a gradual reversal of this trend in the fourth quarter, driven by a recovering labor market, greater access to goods and services that were previously restricted, and by the

second universal bonus to be granted by the government. In this way, private consumption would show an average fall of 9.8 percent in 2020, a slightly lower rate than that projected in the previous Report (10.0 percent).

In 2021, private consumption would grow 8.8 percent, higher than estimated in the previous Report (8.0 percent). This correction is due to better prospects for the terms of trade, which would have a positive impact on the economy's income level. Consumption would continue to recover in 2022 (4.7 percent), in a context of favorable labor market conditions and activity levels similar to those observed prior to the crisis.

37. **Private investment** dropped 28.0 percent year-on-year in the January-September 2020 period due to the lockdown decreed by the Government. However, a better-than-expected evolution was observed in the third quarter due to greater activity in the construction sector, specifically in self-construction projects. Therefore, private investment is estimated to register a contraction of 20.0 percent in 2020, a significantly lower contraction than the one projected in the previous Report (-28.5 percent). This component would recover by 17.5 percent in 2021, amid improved business confidence and favorable long-term financial conditions, while in 2022 it would grow 4.5 percent after the pandemic scenario concludes.

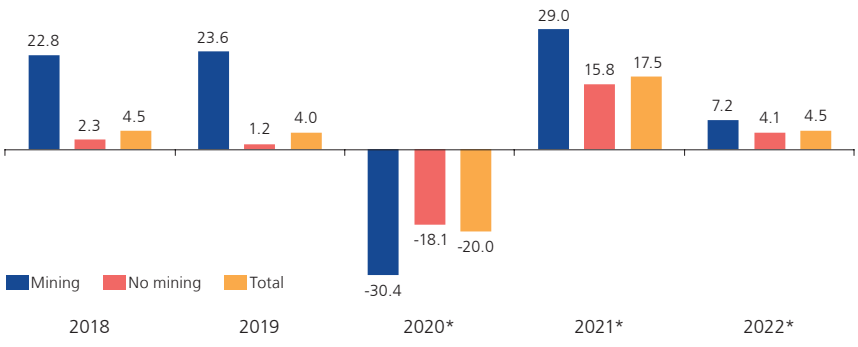
Graph 48
PRIVATE INVESTMENT: 2012 - 2022*
(Real % change)



* Forecast.

a. **Mining investment** was sustained during the quarantine in part due to contracts already agreed by the companies, especially with regard to mining equipment. As of October 2020, mining investment totaled US$ 3.28 billion, with investment being driven mainly by the companies Anglo American Quellaveco (US$ 1.18 billion), Marcobre (US$ 411 million), and Chinalco (US$ 223 million). The projection considers the completion of the construction of the Quellaveco projects (with a total investment of US$ 5.3 billion), Mina Justa (US$ 1.6 billion), and the Expansion of Toromocho (US$ 1.3 billion). Additionally, projects such as Corani (US$ 0.6 billion), Integración Coroccohuayco (US$ 0.6 billion), and San Gabriel (US$ 0.4 billion) are expected to begin construction in 2021, while projects such as Pampa del Pongo (US$ 2.2 billion) and Yanacocha Sulfuros (US$ 2.1 billion) would do so in 2022.

Graph 49
PRIVATE INVESTMENT
(Annual Real % change)



* Forecast.

b. Investment in **infrastructure** is expected to resume in different projects with the gradual restart of activities in the construction sector, with Line 2 of the Lima Metro project standing out as, according to OSITRAN, this project shows an advance of 34 percent as of November. In addition, the works for the expansion of the Jorge Chávez International Airport resumed in July and it is estimated that the new control tower would be ready in

2021 and the second runway in 2022. Moreover, the construction of the San Martín Port Terminal is expected to be completed in the first half of 2021, while the modernization project of the Callao North Pier is expected to be completed in 2022, with a capacity of 2.9 million containers and to manage 9.9 million tons of freight per year.

Table 19

MAIN ANNOUNCEMENTS OF PRIVATE INVESTMENT PROJECTS: 2020-2022

SECTOR	INVESTOR	PROJECTS
MINING	Angloamerican	Quellaveco
	MarCopper	Justa Mine
	Chinalco	Expansion of Toromocho Mine
	Antapaccay	Coroccohuayco
	Bear Creek	Corani
HYDROCARBONS	Cálidda Gas Natural del Perú	Wide-Scale Use of Natural Gas in Central ad South Region
	Promigas Surtigas	Wide-Scale Use of Natural Gas in Piura
ELECTRICITY	ISA Perú	500 kV Mantaro - Carapongo
	Engie	Punta Lomitas wind power plant
	CSF Continua Misti	Solar plant in Arequipa
	GAZ Energie	Thermal plant in Ica
	Energy Development Corp.	Geothermal power plant
INDUSTRY	Fospac	Phosphate plant
	Corporación Aceros Arequipa	Expansion of Pisco Plant
	Precor	Mega factory in Chilca
INFRASTRUCTURE	Consorcio Nuevo Metro de Lima	Line 2 of the Metro network of Lima and Callao
	Lima Airport Partners	Expansion of International Airport (Jorge Chavez)
	Consorcio Transportadora Salaverry	Salaverry Port
	Grupo Volcan	Chancay Port Terminal
	Consorcio Paracas	San Martin Port Terminal
	APM Terminals	Modernization of Muelle Norte
	Covi Perú	Pucusana-Ica road network

Source: Information on companies, newspaper and specialized media.

Proinversión reports a portfolio of over US$ 7.5 billion of investment projects to be awarded in the 2020-2022 period.

Table 20

MAIN PROJECTS TO BE IMPLEMENTED THROUGH CONCESSION ARRANGEMENTS IN 2020-2022

(Million US$)

	Estimated investment
To be called	**7,540**
Peripheral Ring Road	2,049
Ancon Industrial Park	650
New San Juan de Marcona Port Terminal	637
Headworks and Conduction for the Drinking Water Supply in Lima	600
Algarrobo Mining Project	350
Broadband AWS-3 and 2.3 GHz	291
Improvement of Tourist Services in the Choquequirao Archaeological Park	260
National Hospital Hipólito Unanue	250
Huancayo - Huancavelica Railway	232
Schools in risk: Metropolitan Lima	227
Wide-Scale Use of Natural Gas in Central ad South Region	200
Treatment system for wastewater Huancayo	165
500 kV Transmission Line and Piura Nueva - Frontera Substation	163
Schools in Risk: Ate-San Juan de Lurigancho	148
Essalud Piura	144
IPC- Wastewater Treatment for effluent dumping or reuse - Trujillo	129
Modernization of the Regional Electricity Company Electro NOROESTE	123
New Central Military Hospital	115
Essalud Chimbote	110
Schools at Risk: Comas - San Martín de Porres	95
Schools at Risk: Villa María del Triunfo	72
High Performance Schools: COAR Centro	60
IPC -Wastewater Treatment System for Puerto Maldonado	57
Improvement and enlargement of the sewage and wastewater treatment system in Cajamarca	55
138 kV Puerto Maldonado - Iberia Transmission Line and Valle del Chira Substation of 220/60 /22.9 kV	50
IPC- Wastewater Treatment for effluent dumping or reuse, Cusco province	42
Comprehensive Projects of the "220/60 kV Chincha Nueva Substation" and "220/60 kV Nazca Nueva Substation" Projects	38
Ilo desalination plant	37
IPC -Wastewater Treatment for effluent dumping or reuse, Chincha province, Ica	35
Solid Waste Management of Health Establishments Minsa	35
IPC - Wastewater treatment for effluent dumping or reuse, Cañete province	34
Rural sanitation in Loreto	28
IPC - Wastewater Treatment Plant for the city of Tarapoto	26
IPC Cusco	19
Tourist Project Cable Car Historic Center Lima-San Cristobal	14
Longitudinal of the Sierra road project, Section 4:	n.d.*
SITGAS	n.d.*
220 kV Electric Transmission Line Substation Reque - Nueva Carhuaquero	n.d.*

* There is currently no estimated investment amount.

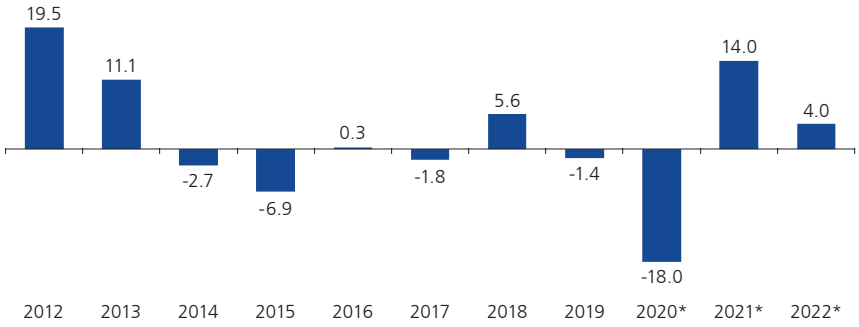
Source: Proinversión.

38. **Public investment** fell 33.7 percent during the first three quarters of the year, mainly due to the interruption of projects during the quarantine period. Since this fall has been reversing in the fourth quarter, public investment would register a contraction of 18.0 percent in 2020. It is worth mentioning that this rate is lower than that projected in the Inflation Report of September (-19.0 percent) due to the increased investment spending observed in October and November.

In 2021 and in 2022, public investment is expected to grow 14.0 and 4.0 percent, respectively, as a result of higher spending on Reconstruction works, on projects

of the National Infrastructure Plan for Competitiveness, on the implementation of Special Public Investment Projects, and the resumption of halted works, among other projects.

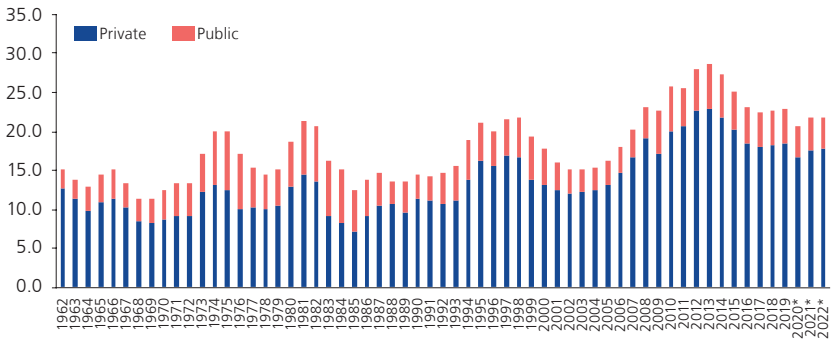
Graph 50
PUBLIC INVESTMENT: 2012 - 2022
(Real % change)



* Forecast.

39. **Gross fixed investment**, as a percentage of real GDP, would fall by 1 percentage point of output in 2022 from its level in 2019, recording 21.9 percent of GDP in real terms. Investment is expected to continue growing in the following years once the economy recovers the levels of economic activity prior to the crisis, which requires preserving macroeconomic stability, consolidating an adequate business environment, and carrying out reforms that support productivity in the economy.

Graph 51
GROSS FIXED INVESTMENT: PRIVATE AND PUBLIC, 1962-2022
(% of real GDP)



40. **Domestic saving** would decline slightly, from 19.9 percent of GDP in 2019 to 19.6 percent in 2020, as the contraction in public savings would outweigh

the increase in private savings. Public saving would decrease by 7.4 percentage points of GDP between 2019 and 2020 due to the use of public resources to face the pandemic and due to the fall in tax revenues as a result of less economic activity. On the other hand, private sector saving would increase to 23.9 percent of GDP –the highest rate observed since the historical series of savings-investment gaps (1970) began to be recorded– due to the lower drop in income compared to consumption and due to the change in spending habits during the pandemic. After 13 years, and due to the drop in the gross domestic investment ratio compared to the previous year, external savings would register a negative rate of 0.7 percent of GDP.

The recovery of gross domestic investment in 2021 as a result of the resumption of public and private projects would reduce the external gap to 0.1 percentage point of GDP. After the normalization of the health scenario at a global level and the recovery of economic activity, public saving would reverse its negative trend due to a lower fiscal deficit, offsetting the fall in private saving, with which the external gap would close in 2022.

Table 21
SAVING-INVESTMENT GAP
(% of nominal GDP)

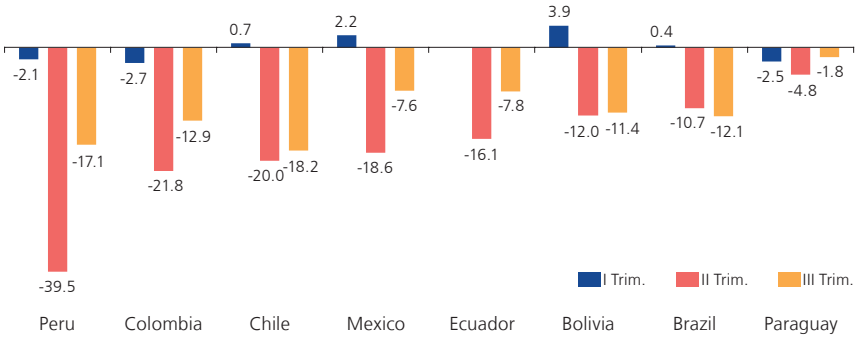
		2019	2020*			2021*		2022*
			Jan.-Sep.	IR Sep.20	IR Dec.20	IR Sep.20	IR Dec.20	IR Dec.20
1	**Domestic Gross Investment** 1/	**21.4**	**18.2**	**17.6**	**18.9**	**19.0**	**19.9**	**19.9**
2	**Domestic Saving**	**19.9**	**18.4**	**17.5**	**19.6**	**17.5**	**20.0**	**20.0**
	External Gap (=2-1)	-1.5	0.2	-0.1	0.7	-1.6	0.1	0.0
1.1	Private Domestic Gross Investment 1/	16.8	15.2	13.4	14.7	14.8	15.6	15.7
1.2	Private Saving	16.9	21.2	22.5	23.9	18.4	20.2	18.7
	Private Gap (=1.2-1.1)	0.1	6.0	9.1	9.2	3.6	4.5	3.0
2.1	Public Investment	4.6	3.0	4.2	4.2	4.2	4.2	4.2
2.2	Public Saving	3.0	-2.8	-5.0	-4.4	-0.9	-0.2	1.2
	Public Gap (=2.2-2.1)	-1.6	-5.8	-9.2	-8.6	-5.1	-4.4	-3.0

* Forecast.
1/ Includes change on inventories.
Source: BCRP.

Employment

41. The Peruvian labor market was strongly affected during the pandemic. The economic lockdown had a direct impact on the employed population, while compulsory confinement made it difficult for the unemployed to find a job and, therefore, to reincorporate themselves to the labor force. For this reason, the fall in the number of employed persons in Peru was reflected in an increase in the inactive population. Compared to other countries in the region, Peru registered the largest contraction of the employed population (-39.5 percent) in the second quarter, and the second largest reduction after that registered in Chile in the third quarter.

Graph 52
EVOLUTION OF EMPLOYED POPULATION
(Annual % change)



Source: Statistical institutes.

42. The restart of most of the labor-intensive activities and the smoothing of confinement measures translated into an increase in the number of employed population, from 10.3 million in the second quarter of the year to 14.3 million in the subsequent quarter. Nonetheless, compared to the same period of the previous year, 2.9 million people lost their jobs, which implies a year-on-year contraction of employment of 17.1 percent. This drop is mainly explained by the reduction of 21.7 percent of jobs in urban areas, and, to a lesser extent, by the reduction of 0.7 percent of rural employment, the latter being less affected as labor is mainly linked to the agriculture sector.

Table 22
NATIONAL EMPLOYMENT
(Million people)

	2019		2020			
	Q3	Q4	Q1	Q2	Q3	Q4*
A. Working-age population (PWA)	24.6	24.7	24.7	24.9	24.9	25.0
B. Economically active population (EAP)	17.8	18.0	17.4	11.3	15.8	17.7
C. Activity rate	72.6	73.1	70.2	45.3	63.3	70.8
D. Employed population	17.2	17.4	16.5	10.3	14.3	16.4
1. Urban	13.4	13.5	12.6	6.7	10.5	12.5
a. Dependent formal 1/	5.1	5.3	5.1	4.6	4.8	5.0
b. Informal and independent	8.2	8.2	7.5	2.1	5.6	7.5
2. Rural	3.8	3.9	3.9	3.5	3.8	3.9
J. Unemployed (B-D)	0.6	0.6	0.9	1.0	1.5	1.3
F. Unemployment rate (E/B)	3.5	3.6	5.1	8.8	9.6	7.3

1/ Those dependent workers registered in the Electronic Payroll.
* Forecast.
Source: ENAHO, Sunat.

Despite the fact that 2.9 million people lost their jobs, the unemployed population only increased by 0.9 million as 2.1 million people left the labor force, with which the participation rate decreased by 9.3 percentage points.

43. The drop in employment, which was not uniform, affected mainly informal workers in urban areas who worked in the sectors of commerce and services.[7] In the second and third quarters of the year, informal employment fell 53.1 and 21.8 percent, respectively, and only in the fourth quarter is it expected to register rates of decline similar to those observed in formal employment.

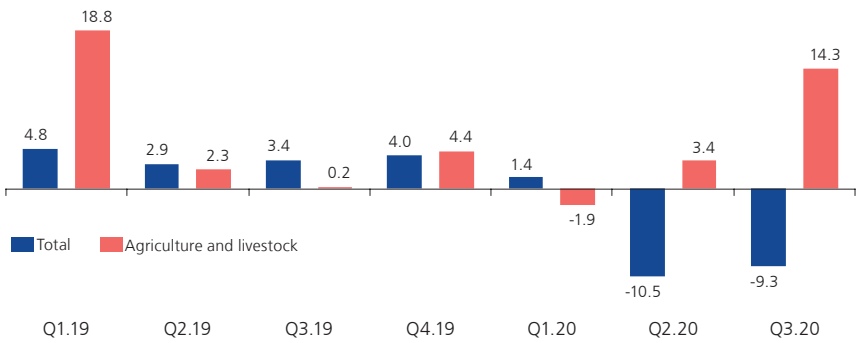
Table 23
EMPLOYED POPULATION BY FORMALITY SITUATION
(In millions and percentage changes)

	Q1.19	Q2.19	Q3.19	Q4.19	Q1.20	Q2.20	Q3.20	Q4.20
Employed population	16.8	17.0	17.2	17.4	16.5	10.3	14.3	16.4
Dependent formal	5.0	5.0	5.1	5.3	5.1	4.7	4.8	5.0
Independent and informal	11.9	12.0	12.1	12.1	11.4	5.6	9.4	11.4
(Annual percentage change)								
Dependent formal	2.3	2.1	2.9	3.7	2.7	-7.2	-6.0	-4.4
Independent and informal	1.0	2.6	2.1	2.1	-4.1	-53.1	-21.8	-5.9

Source: Sunat and INEI.

As for formal employment in the private sector, on the other hand, the Electronic Payroll data register a decrease of 10.5 and 9.3 percent in the second and third quarters, respectively (on average 350 thousand jobs were lost). It is worth pointing out, however, that there was a significant increase in formal employment in the modern agricultural sector, associated with agro-exports, in this period. Only in the third quarter was there an increase of 60 thousand jobs.

Graph 53
JOBS IN PRIVATE SECTOR
(Annual % change)



7 These variations are estimated on the basis of the total employed population reported by the ENAHO and the total number of workers with formal jobs reported by the Electronic Payroll. From the difference we obtain the informal population, which includes both informal dependent workers and independent workers.

44. Contrasting with the increase of employment in the agricultural sector, activities in the sectors of services and commerce have been the most affected by the severe restrictions established to control the pandemic, so employment in these sectors shows the greatest reductions (3.2 million jobs were lost).

Table 24
NATIONAL EMPLOYMENT
(Million people)

	Q3					
	2019	%	2020	%	Change 2020/2019	
					%	Thousand
Total	**17,200**	**100**	**14,257**	**100**	**-17.1**	**-2,942**
- Agriculture and Livestock	3,890	22.6	4,689	32.9	20.5	799
- Fishing	124	0.7	79	0.6	-35.9	-44
- Mining	231	1.3	105	0.7	-54.6	-126
- Manufacturing	1,533	8.9	1,237	8.7	-19.3	-296
- Construction	1,008	5.9	889	6.2	-11.8	-119
- Commerce	3,259	18.9	2,290	16.1	-29.7	-968
- Services	7,156	41.6	4,968	34.8	-30.6	-2,187

Source: ENAHO

45. Moreover, according to data of the Permanent Employment Survey (EPE) for Metropolitan Lima, income has registered a decrease in this region, especially in the case of independent workers. In the September-November moving quarter, the average income of dependent workers decreased 6.2 percent, while the income of self-employed workers decreased 31.5 percent, particularly in the sectors of construction and services.

Table 25
AVERAGE INCOME IN METROPOLITAN LIMA
(In current soles)

	Setiembre - Noviembre					
	Dependents			Independent		
	2019	2020	Var %	2019	2020	% change
Average income	**1,927**	**1,807**	**-6.2**	**1,628**	**1,116**	**-31.5**
By productive sector:						
Manufacturing	1,713	1,485	-13.3	1,482	1,057	-28.7
Construction	1,902	1,702	-10.5	2,506	1,244	-50.4
Commerce	1,490	1,292	-13.3	1,380	965	-30.1
Services	2,032	2,057	1.3	1,720	1,179	-31.5

Source: INEI.

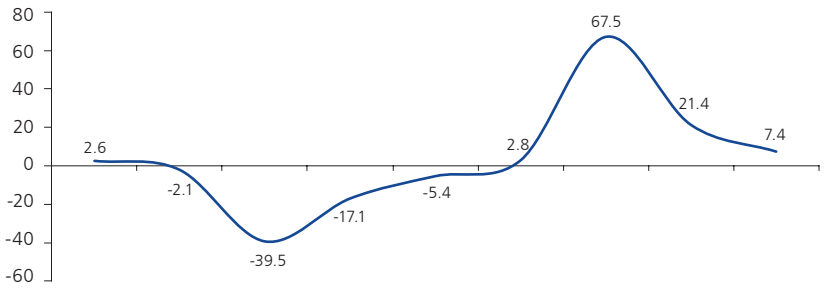
46. Employment is expected to recover in the fourth quarter of 2020 and in 2021 as containement restrictions loosen, so by the end of 2020 the employed population is projected to reach 16.4 million people. However, given the restrictions in force

in certain formal sectors (restaurants, education, entertainment and hotels), it is expected that people who return to the employed population will do so working mainly in the informal labor market, in self-generated (independent) jobs, and in the sectors of commerce and services that regularly account for 56 percent of informal employment in urban areas. In 2021, employment would show an average growth rate of 20.3 percent.

Graph 54

EVOLUTION OF EMPLOYED POPULATION

(Annual % change)



	Q4.19	Q1.20	Q2.20	Q3.20	Q4.20	Q1.21	Q2.21	Q3.21	Q4.21
Employed population*	17.4	16.5	10.3	14.3	16.4	17.0	17.2	17.3	17.7

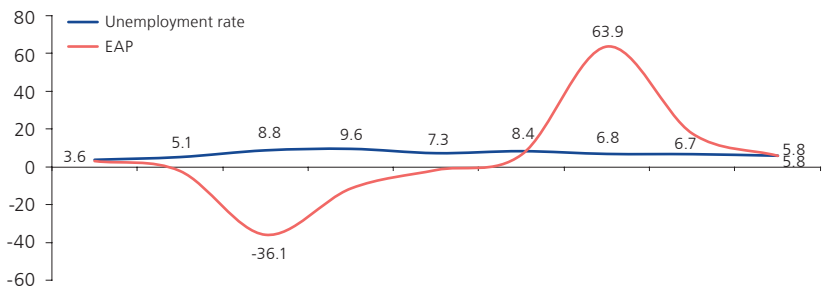
*In million people.

On the other hand, the unemployment rate is projected to reach 7.3 percent in the fourth quarter of 2020, which is equivalent to 1.3 million people looking for a job. In 2021, it would register an average rate of 6.9 percent.

Graph 55

ECONOMICALLY ACTIVE POPULATION (EAP) AND UNEMPLOYMENT RATE 1/

(Annual percentage change of the EAP)



	Q4.19	Q1.20	Q2.20	Q3.20	Q4.20	Q1.21	Q2.21	Q3.21	Q4.21
EAP	18.0	17.4	11.3	15.8	17.7	18.5	18.5	18.6	18.8
Unemployed	0.6	0.9	1.0	1.5	1.3	1.5	1.3	1.2	1.1

* In million people.

1 / Unemployment is seasonally higher in the first quarter.

Box 3
ESTIMATION OF THE REPRODUCTION NUMBER (R) FOR PERU

An important tool of analysis of the evolution of the pandemic used for decision making is the estimated effective reproduction number of COVID-19.

The Reproduction Number (R)

The reproduction number R measures the transmission potential of a disease; in other words, how infectious a disease is. Two reproduction numbers are usually analyzed: R_0 or basic R and R_t or the effective R. The basic R measures the transmission capacity of a disease at the beginning of the disease, when all individuals in the population are susceptible to infection; that is, it measures the degree of natural contagion of a disease. For example, if we asume that the basic R of COVID-19 is 3, it means that in a population where no one is immune and no action is taken to control the outbreak of the disease, each infected individual transmits the virus to three people on average. The R_0 excludes new cases produced by secondary cases.

The effective R number allows us to measure the average number of people who at a moment of time "t" can become infected with secondary cases of infection. Of course, the actions implemented to prevent the spread of a disease decrease its transmission potential and therefore the effective R. In the case of COVID-19, social distancing and the use of masks are expected to decrease the transmissibility of the virus and, therefore, to decrease the effective R.

Epidemiologists say that the only way to combat the spread of COVID19 is to understand the effective R and act based upon this indicator. The R_t values have different implications: (i) if R>1, the number of new cases grows over time and the disease spreads; (ii) if R=1, the number of new cases remains constant; and (iii) if R<1, the number of new cases decreases over time. During the pandemic, countries began to reduce restrictions when R_t registered levels below 1. If R_t falls below 1 and the number of infections in general also falls, the virus becomes manageable.

Estimation method

The following state space model[8] was used to estimate the reproduction number R_t:

Observation equation: $I_{t+1} \sim Poisson(I_t e^{\theta_t})$

State equation: $\theta_t \sim N(\theta_{t-1}, \sigma)$

8 The estimation is based on Vladeck (2020), https://tomvladeck.com/2020/04/15/rt-ssm.html.

where t represents days. I_t is the total number of people infected in the last 20 days[9]; that is, it is a smoothed indicator of the rate of infection. The variable θ_t is the expected growth rate in the rate of infections. This variable can be expressed as $\theta_t = \gamma(R_t - 1)$ where γ is the inverse of the number of days it takes for the appearance of symptoms in an infected person (serial interval), and is the effective reproduction number. In this model, θ_t is the non-observable state variable since it depends on R_t which is non observable:

$$R_t = \frac{\theta_t}{\gamma} + 1$$

The state space model is estimated using the Kalman filter. In this way, R_t is obtained from the estimation of $\theta_t = \gamma\,(R_t - 1)$.

We can see that if the contagion rate grows $\theta_t > 0$, then $R_t > 1$. When the rate of contagion stops growing, we have $\theta_t = 0$ and therefore $R_t = 1$, while if the rate of contagion is clearly decreasing $\theta_t < 0$, we obtain $R_t < 1$.

In the case of COVID-19, the serial interval is estimated to be between 4 and 8 days. The estimates presented assume that the serial interval is 6 days[10], that is, $1/\gamma = 6$.

Estimations of R

The main input in the estimation of R_t is the number of new infected people, based on which I_t is calculated. However, this figure not only reflects the transmissibility of the virus but also the intensity of the tests applied to detect infected individuals. Moreover, the official numbers of infected people are only registered from the day of detection and not from the onset of symptoms. In other wordss, the observed variable I_t has measurement errors and should be used with caution in the measurement of R.

Taking this measurement problem into account, different versions of R are estimated that differ in approximating the number of newly infected individuals according to the following table.

9 If I_t were the accumulated number of people infected in "t", then R would never be less than 1. To allow the possibility that R<1, it is assumed that I_t represents the total number of people infected in the last N days. In this case, N=20.

10 Nishiura, Linton and Akhmetzhanov (2020) estimate that it is 4.6 days with with a 95 \% confidence interval between 3.5 and 5.9. See: https://www.ijidonline.com/article/S1201-9712(20)30119-3/pdf.

DAILY NEW INFECTED VERSIONS USED FOR R-NUMBER CORRESPONDING VERSION ESTIMATES

Version	Definition	Source
I1	Official number of newly infected who were identified with any type of test	Situation Room MINSA
I1*	Official number of newly infected who were identified only with PCR tests.	Open Data MINSA
I2	Number of newly infected estimated from official death figures	Situation Room MINSA
I3	Number of newly infected estimated from estimates of excess deaths.	SINADEF
I3*	Number of newly infected estimated from estimates of excess deaths adjusted for end-of-sample bias correction.	SINADEF

Versions I2, I3, and I3* are approximations of infections estimated on the basis of death figures. Version I2 is the official death toll published everyday in the COVID-19 Situation Room, while versions I3 and I3* correspond to the daily death figures with death certificates specifying COVID-19, Coronavirus or SARS-CoV-2 as a possible cause of death. The latter information is obtained from the Sistema Informático Nacional de Defunciones (SINADEF).

SINADEF publishes these statistics as information is received in this information system, so the data is liable to be corrected backwards. The death figures for the previous day are usually relatively low compared to other days because not all the information about the deaths of the previous day has arrived. As the days go by, the information stabilizes and reflects the true death toll for that day. Therefore, the real-time figures are skewed to the downside due to early publication. To control for this bias, our calculation I3 cuts the series of deaths up to a few days before in order not to include the skewed figures, while calculation I3* considers a statistical correction for the bias based on the historical corrections that have to be made with the figures until the information stabilizes.

To estimate the number of infected people from the number of deaths, it is assumed that: (i) there are approximately 7 days between the infection and the death of a person (if it occurs), and (ii) the fatality rate of COVID-19 cases is 3.4 (according to the World Health Organization). Under these assumptions, the estimate of the number of infected people on day t, I_t , is obtained according to the following formula:

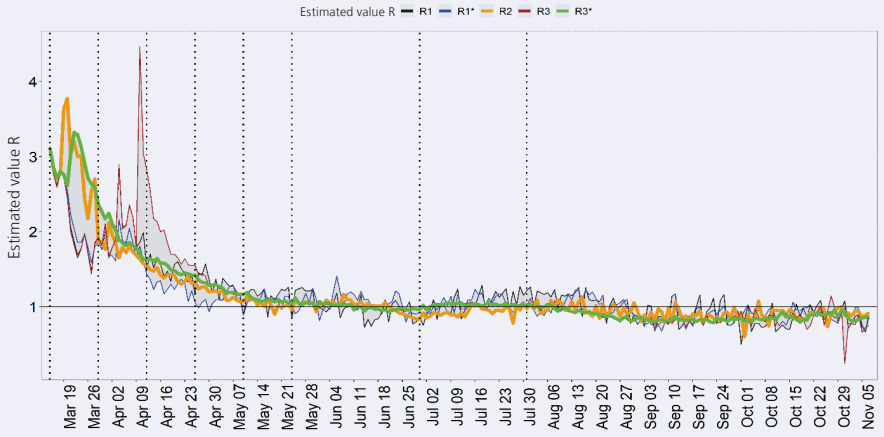
$$I_t = \frac{M_{t+7}}{\phi}$$

Since the estimate is a function of the advance of deaths, the estimate of the most recent 7 days of requires predicting the number of deaths.

A total of five alternative R numbers are estimated: R1 based on I1, R1* based on I1*, R2 based on I2, R3 based on I3, and R3* based on I3*. The following graph shows the evolution of the different estimates of effective R; the dotted vertical lines indicate the dates on which the period of compulsory confinement extended.

11 PCR stands for "Polymerase Chain Reaction". The PCR test is a diagnostic test that detects a fragment of the genetic material of a pathogen or microorganism.

REPRODUCTION NUMBER ESTIMATES R

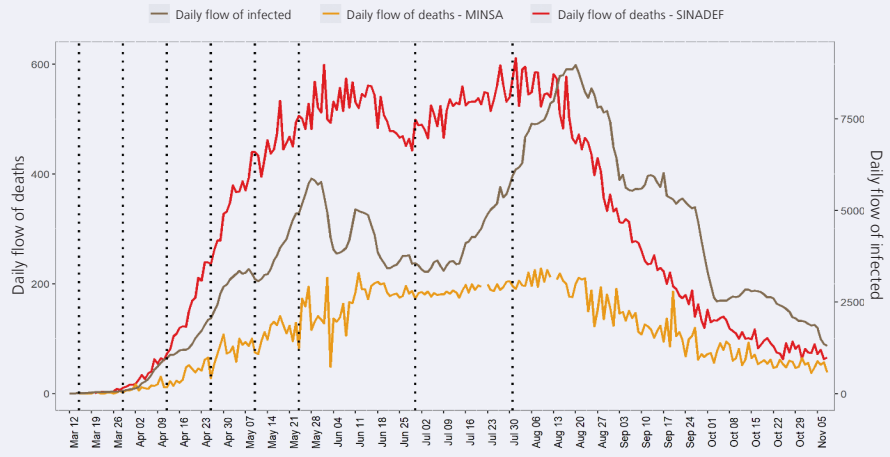


Source: MINSA and SINADEF.

The graph shows that the different estimates of the reproduction number have been below 1 since the end of August, which implies that the contagion is in a decreasing phase.

This result is consistent with the recent evolution of the number of people infected and deceased. The rate of infections detected has slowed down since the end of August. As the graph below reflects, the daily flow of infected people (moving average of the last 7 days) decreased from almost 9,000 at the end of August to less than 2,000 at the beginning of November. During the same period, the number of deaths fell from approximately 600 to 60 cases according to SINADEF and from 300 to 40 cases according to MINSA.

EVOLUTION OF THE DAILY FLOW OF INFECTED AND DEATHS FROM COVID-19



Memo: The flow of infected is a moving average of the new cases detected in the last 7 days.
Source: MINSA and SINADEF.

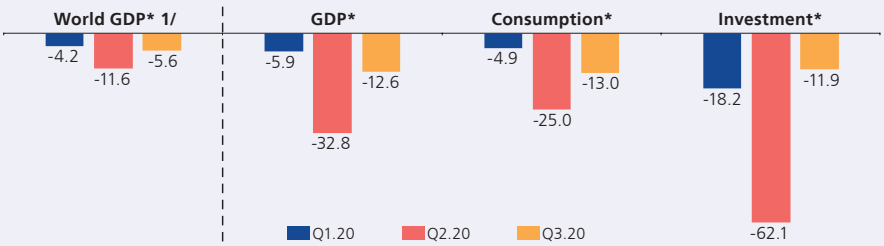
Box 4
AGGREGATE IMPACTS OF THE COVID-19 SHOCK

The factors that explain the main macroeconomic effects of the pandemic are discussed in this box. The unprecedented fluctuations observed in the different indicators of economic activity throughout this year have not only made the analysis of the transmission channels of shocks more difficult, but also the elaboration of macroeconomic projections.[12] The impact of the pandemic on the main macroeconomic variables is captured in the variations of great magnitude observed that were not predictable before the shock. Consequently, to measure the effects of the pandemic, the observed data for 2020 are compared with the respective projections made in December 2019, which are considered as a counterfactual scenario without a pandemic.

The methodology proposed by Primiceri and Tambalotti (2020)[13] is extended to a small open economy to estimate the aggregate impacts of the COVID-19 shock in the Peruvian economy. In this way, conditional on maintaining the usual transmission mechanisms, we analyze the deviations from the projections for 2020 and identify the contribution of the COVID-19 shock to the deviation from the GDP projection.

The following graph shows the results associated with this exercise. Each bar represents deviations of the executed values from the hypothetical values without a pandemic, the greatest deviation of internal variables (GDP, consumption, and investment) being particularly noteworthy in the second quarter of 2020, in line with the pandemic control measures implemented by the government.

EFFECT OF COVID-19 ON THE MAIN MACROECONOMIC VARIABLES IN 2020
(In percentage points over the year-on-year growth rate)



	GDP World 1/		GDP		Consumption		Investment	
	Oserved	Impact	Oserved	Impact	Oserved	Impact	Oserved	Impact
Q1.20	-1.7	-4.2*	-3.5	-5.9*	-1.7	-4.9*	-16.8	-18.2*
Q2.20	-9.2	-11.6*	-29.8	-32.8*	-22.1	-25.0*	-60.2	-62.1*
Q3.20	-3.3	-5.6*	-9.4	-12.6*	-9.7	-13.0*	-7.2	-11.9*

Note: The "Observed" columns report the annual percentage growth rates registered in the data, while the "COVID-19 Effect" columns contain the deviations in the projection (in percentage points) on these rates as a result of the pandemic (variation not predictable). With the exception of raw material prices, the model predicts positive year-on-year growth rates for 2020 in the hypothetical scenario without a pandemic, which is why the COVID-19 effect always exceeds the observed growth rates in magnitude.
1/ PBI-G20 as a proxy for world production.
* COVID-19 effect different from zero with a 90 percent probability.

12 The difficulty increases because the usual transmission mechanisms may lose relevance in the face of this event, which, in addition to being large-scale, is persistent and takes place simultaneously in different sectors. Therefore, the reliability of the econometric models commonly used for forecasts (which are estimated using information from frequently observed events) could be compromised in the face of an event as unusual as COVID-19.

13 Primiceri and Tambalotti (2020). "Macroeconomic Forecasting in the Time of COVID-19".

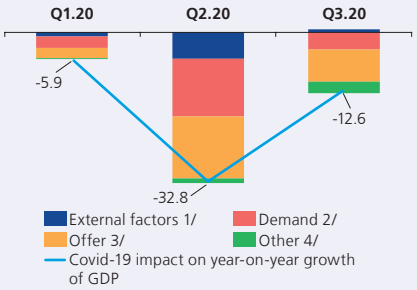
The methodology allows us to identify that, had the COVID-19 shock not materialized, the year-on-year growth rates of private investment, GDP, and consumption would have been higher by 62, 33, and 25 percentage points, respectively. In other words, the variations observed in these variables throughout 2020 have been extremely atypical due to the pandemic. Moreover, the results obtained also suggest a rapid recovery in economic activity in the third quarter of this year, which is reflected in a lower deviation of each variable with respect to the projection scenario without a pandemic in 2020.

On the other hand, the size of the deviations with respect to the initial projection of other variables, such as the current account, the prices of the main exported metals, the real exchange rate, and the dometic interest rate are much lower and in line with their respective historical deviations.

The following graph shows the contribution of the COVID-19 shock on the deviation of the GDP growth projection.[14] The results suggest that the main contribution of the deviation of the GDP with respect to its original projection for the first quarter was caused by domestic factors on the side of demand (42 percent) and on the side of supply (38 percent) associated with the quarantine established in the last 15 days of the quarter, followed by external factors (16 percent) associated mainly with the drop in world GDP.

DECOMPOSITION OF THE EFFECT OF THE COVID-19 SHOCK ON GDP

Contributions add deviation in projections



Contributions total 100

	Q1.20	Q2.20	Q3.20
External factors 1/	16	18	-5
Real domestic factors	80	79	85
Demand 2/	42	38	30
Offer 3/	38	41	55
Other 4/	4	3	20

1/ External factors include the COVID-19 shocks to world GDP, the price index of the main metals exported by Peru and the international interest rate.
2/ The COVID-19 shocks on consumption and private investment are considered as proxy of demand factors.
3/ The COVID-19 shock on GDP is considered as a proxy of supply factors.
4/ Includes COVID-19 shocks to the variables of the financial segment and the current account.

In the second quarter, the main contribution to the drop in GDP were domestic supply factors (41 percent) and demand factors (38 percent), associated with the measures established to control the pandemic, followed by external factors (18 percent). On the other hand, the lower GDP drop observed in the third quarter is explained both by supply factors, associated with the gradual reopening of the economy, as well as by domestic demand factors linked in part to monetary stimulus measures. The contribution of external factors is positive in the third quarter, mostly due to an increase in commodity prices.

Moreover, the results also suggest that the financial channels of amplification and propagation have not had a great impact, which would be associated with the monetary policy response of BCRP.

14 It is assumed that the most exogenous variables of the model correspond to the external sector, while the most endogenous correspond to the domestic financial segment, which is reasonable assuming that there are no monetary policy surprises in this context. In addition, the real domestic variables are at an intermediate level of endogeneity, which implies that they react contemporaneously to shocks originated in the external sector, but do not respond (at least contemporaneously) to shocks originated in the domestic financial segment.

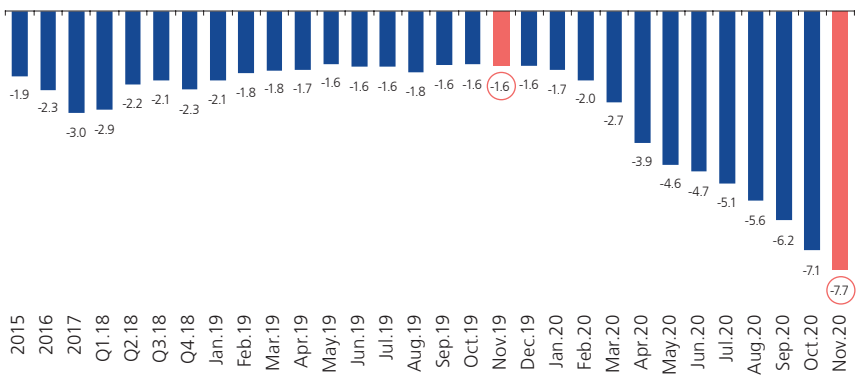
IV. Public Finances

47. Since September –when our last Inflation Report was published–, the fiscal deficit has continued to increase, rising from 5.6 to 7.7 percent of GDP between August and November. This increase is explained both by higher non-financial expenditure and by the general government's lower current income. Non-financial expenditure reflects mainly the transfers made by the National Government to grant the second Universal Family Bond of S/ 760 (ED No. 098-2020). Between October 10 and the end of November, government resources have been used to aid 6.9 million households out of a total of 8.4 million.

Graph 56

ECONOMIC BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR: 2015 - 2020

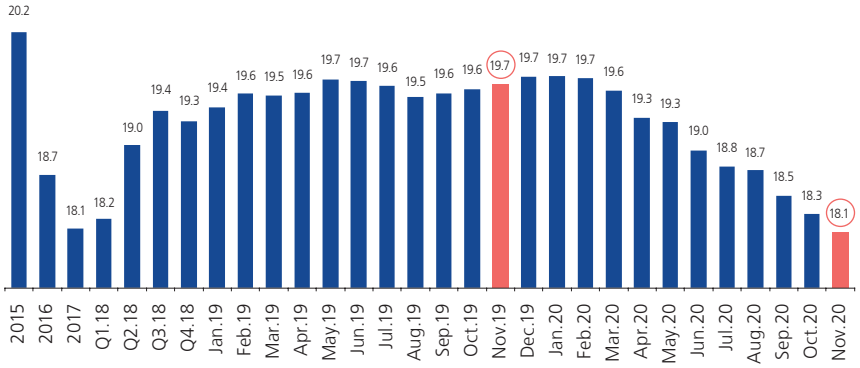
(Accumulated last 12 months - % GDP)



Graph 57

CURRENT REVENUES OF THE GENERAL GOVERNMENT: 2015 - 2020

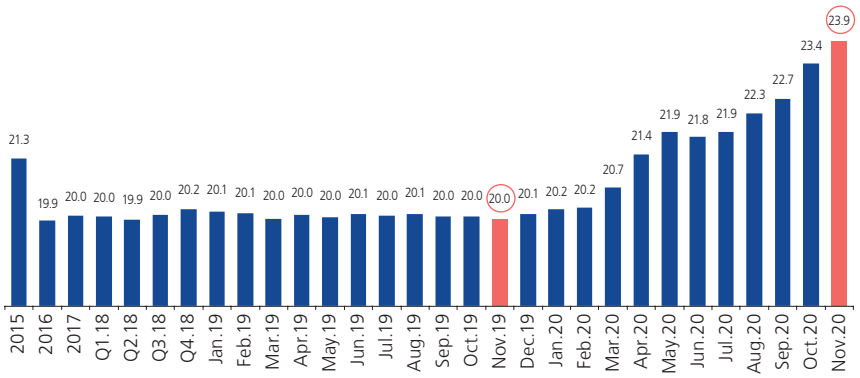
(Accumulated last 12 months - % GDP)



Graph 58

NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT: 2015 - 2020

(Accumulated last 12 months - % GDP)



Revenues, on the other hand, reflect the impact of the contraction of economic activity on tax collection.

48. Taking into account the evolution of fiscal expenditure and income, the projection of the **fiscal deficit** has been lowered from 9.2 to 8.6 percent of GDP in 2020 and from 5.1 to 4.4 percent in 2021 with respect to the September Report. This revision is mainly explained by higher current revenue than that forecast in September, in line with the recovery of economic activity observed and expected in the forecast horizon, as well as by the lower-than-expected impact of requests for tax fractionation on revenues.

By the end of 2022, the fiscal deficit is estimated to be 3.0 percent of GDP, considering a scenario in which the effects of COVID-19 on economic activity and tax revenues would have already dissipated and current expenditure has consolidated.

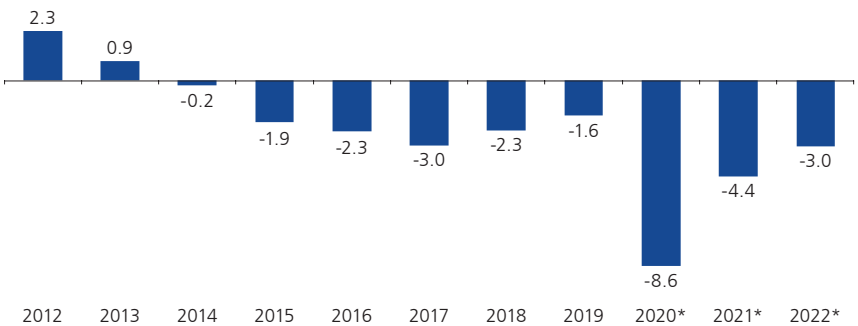
The baseline scenario for the projection of fiscal accounts does not include additional fiscal expenditure of around S/ 16 billion originated by Law 31083, as its constitutionality is to be determined by the Constitutional Court.

Table 26
NON-FINANCIAL PUBLIC SECTOR
(% GDP)

	2019	2020*			2021*		2022*
		Jan.-Nov.	IR Sep.20	IR Dec.20	IR Sep.20	IR Dec.20	IR Dec.20
1. General government current revenues	**19.7**	**18.1**	**18.0**	**18.0**	**18.7**	**18.8**	**19.7**
Real % change	*4.3%*	*-19.4%*	*-19.5%*	*-17.8%*	*15.3%*	*17.4%*	*9.3%*
2. General government non-financial expenditure	**20.1**	**23.0**	**25.1**	**24.6**	**22.2**	**21.6**	**21.0**
Real % change	*1.3%*	*8.3%*	*10.8%*	*10.5%*	*-2.3%*	*-1.1%*	*1.6%*
Of which:							
Current expenditure	15.5	19.1	20.7	20.2	17.8	17.1	16.4
Real % change	*3.3%*	*15.3%*	*17.9%*	*17.3%*	*-4.4%*	*-4.7%*	*0.0%*
Gross capital formation	4.0	3.0	3.6	3.7	3.7	3.8	3.9
Real % change	*-4.7%*	*-24.0%*	*-18.8%*	*-16.7%*	*13.7%*	*16.8%*	*6.8%*
3. Others	**0.1**	**-0.2**	**-0.4**	**-0.3**	**0.1**	**0.0**	**0.0**
4. Primary balance (1-2+3)	**-0.2**	**-5.1**	**-7.6**	**-6.9**	**-3.4**	**-2.8**	**-1.3**
5. Interests	**1.4**	**1.8**	**1.7**	**1.6**	**1.7**	**1.6**	**1.7**
6. Overall Balance	**-1.6**	**-6.9**	**-9.2**	**-8.6**	**-5.1**	**-4.4**	**-3.0**

* Forecast.
IR: Inflation Report.

Graph 59
ECONOMIC BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR: 2012 - 2021
(% GDP)



* Forecast.

Current Income

49. The projected reduction in **current income** in 2020 –17.8 percent in real terms– would be lower than that estimated in the previous Report, in line with the lower economic contraction projected and with a lower impact of the tax split than that considered in the September report.

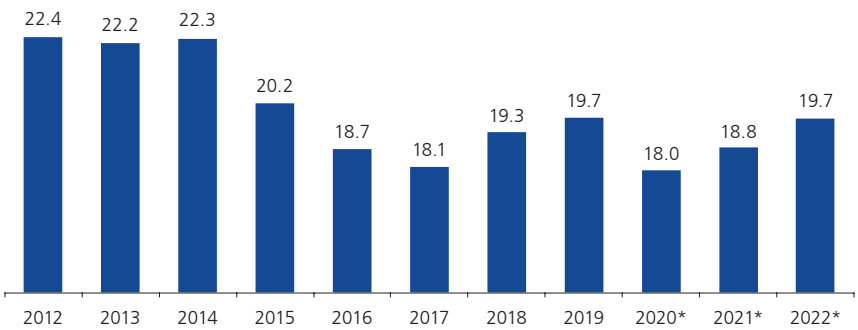
Table 27
CURRENT REVENUES OF THE GENERAL GOVERNMENT
(% GDP)

	2019	2020*			2021*		2022*
		Jan.-Nov.	IR Sep.20	IR Dec.20	IR Sep.20	IR Dec.20	IR Dec.20
TAX REVENUES	**14.8**	**13.6**	**13.3**	**13.4**	**14.1**	**14.1**	**15.0**
Income tax	5.7	5.6	5.4	5.4	5.3	5.3	5.9
Value Added Tax	8.2	7.8	7.6	7.8	7.9	8.0	8.2
Excise tax	1.1	1.0	1.0	1.0	1.0	1.0	1.1
Import duties	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Other tax revenues	1.9	1.6	1.7	1.6	1.9	1.8	1.9
Tax returns	-2.3	-2.5	-2.4	-2.4	-2.2	-2.2	-2.2
NON-TAX REVENUES	**5.0**	**4.4**	**4.6**	**4.6**	**4.6**	**4.7**	**4.7**
Contributions to social security	2.2	2.3	2.1	2.3	2.1	2.3	2.3
Own resources and transfers	1.7	1.5	1.7	1.6	1.6	1.6	1.6
Royalties and likely	0.6	0.4	0.5	0.4	0.5	0.5	0.5
Other	0.5	0.2	0.3	0.2	0.4	0.3	0.3
TOTAL	**19.7**	**18.1**	**18.0**	**18.0**	**18.7**	**18.8**	**19.7**

* Forecast.
IR: Inflation Report.

The growth of current income projected for 2021 is revised up with respect to the previous Report, from 15.3 to 17.4 percent in real terms, due to the expected impact of the higher level of economic activity on tax revenues. As a percentage of GDP, current income would register 18.8 and 19.7 percent in 2021 and 2022, respectively.

Graph 60
CURRENT REVENUES OF THE GENERAL GOVERNMENT: 2012 - 2022
(% GDP)



* Forecast.

Non-financial expenditure

50. The projected **real growth of non-financial expenses** is revised slightly down, from 10.8 to 10.5 percent in 2020, with respect to our previous estimates, and in GDP terms, it is revised from 25.1 to 24.6 percent, mainly due to the higher-than-estimated level of output.

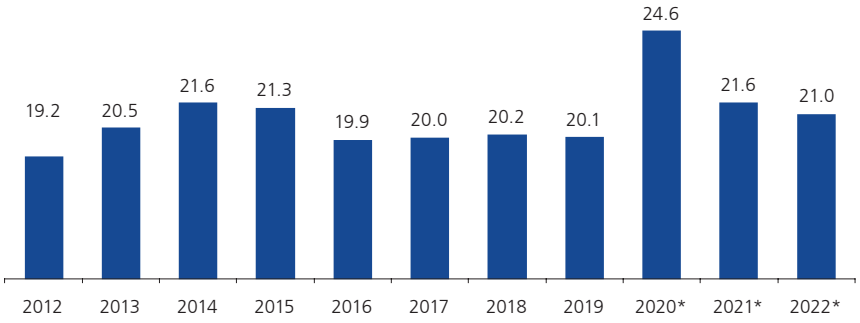
The projection considers the delivery of the new **Bonus for Economic Reactivation** to public sector workers that will be given in December 2020, in addition to the Christmas bonus that public workers receive.

Table 28
NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT
(% GDP)

	2019	2020*			2021*		2022*
		Jan.-Nov.	IR Sep.20	IR Dec.20	IR Sep.20	IR Dec.20	IR Dec.20
CURRENT EXPENDITURE	**15.5**	**19.1**	**20.7**	**20.2**	**17.8**	**17.1**	**16.4**
National Government	10.5	13.3	14.3	13.9	12.1	11.4	11.0
Regional Governments	3.5	4.0	4.3	4.2	3.9	3.8	3.7
Local Governments	1.6	1.9	2.1	2.0	1.9	1.8	1.7
CAPITAL EXPENDITURE	**4.6**	**3.8**	**4.5**	**4.4**	**4.3**	**4.5**	**4.7**
Gross capital formation	**4.0**	**3.0**	**3.6**	**3.7**	**3.7**	**3.8**	**3.9**
National Government	1.5	1.1	1.4	1.3	1.5	1.4	1.4
Regional Governments	0.8	0.7	0.8	0.8	0.8	0.8	0.9
Local Governments	1.6	1.3	1.4	1.5	1.4	1.6	1.6
Others	**0.6**	**0.8**	**0.8**	**0.7**	**0.6**	**0.7**	**0.7**
TOTAL	**20.1**	**23.0**	**25.1**	**24.6**	**22.2**	**21.6**	**21.0**
National Government	12.6	15.2	16.5	16.0	14.1	13.4	13.1
Regional Governments	4.3	4.7	5.1	5.1	4.7	4.7	4.6
Local Governments	3.2	3.1	3.6	3.6	3.3	3.5	3.4

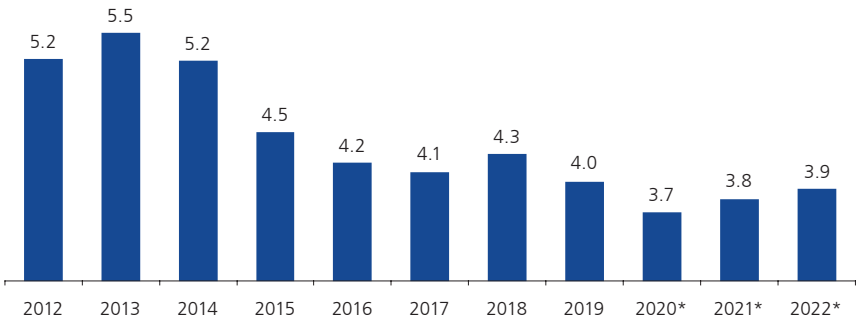
* Forecast.
IR: Inflation Report.

Graph 61
NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT: 2012 - 2021
(% GDP)



* Forecast.

Graph 62
GROSS CAPITAL FORMATION OF THE GENERAL GOVERNMENT: 2012 - 2021
(% GDP)



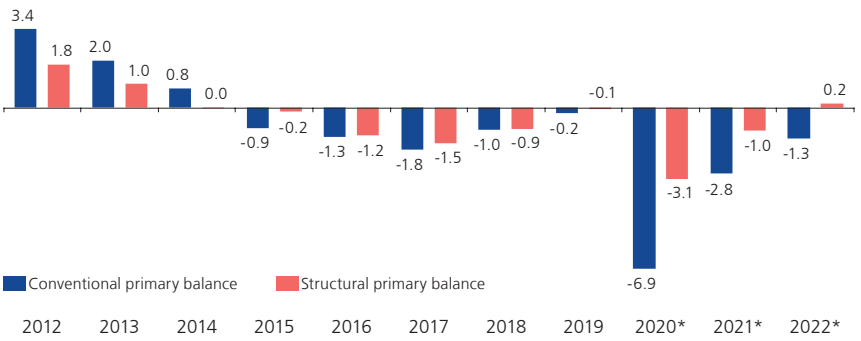
* Forecast.

In 2021, non-financial expenditure would decrease 1.1 percent due to the completion of the extraordinary measures to face COVID-19, especially transfers to households.

Fiscal Stance

51. The **structural primary balance** is an indicator that isolates the effects of factors outside the government's control, such as export prices or the stage of the business cycle, on fiscal aggregates, particularly on tax revenues. A structural primary deficit of 3.1 percent of trend GDP is estimated in 2020 and a structural primary deficit of 1.0 percent is estimated in 2021 (both rates above the almost zero structural primary deficit in the year prior to the pandemic), in line with the need to carry out extraordinary fiscal measures to face COVID-19.

Graph 63
CONVENTIONAL AND STRUCTUTRAL PRIMARY BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR: 2012 - 2021
(% GDP and trend GDP)



* Forecast.

52. The **fiscal impulse** measures the change in the economic balance of the Government resulting from variations in public spending and tax policies. The weighted fiscal impulse is an alternative indicator to measure the fiscal stance, weighing with differentiated multipliers the changes in structural income, current expenditure and capital expenditure. This indicator registers an expansionary fiscal policy in 2020, estimated at 1.5 percentage points of trend GDP. Both the expansinary fiscal and monetary policy stances have been contributing to offset the negative shock of COVID-19 this year.

It is worth mentioning that although the fiscal stimulus will be declining in the coming years, the fiscal position will still be expansionary in comparison to the fiscal stance in 2019. This is mainly the result of the temporary increase in public expenditure, which in weighted terms, would generate a stimulus of 0.2 percent of trend GDP in 2021 and 0.1 percent in 2022, compared to 2019.

Financing and Debt

53. Lower **financing requirements** than estimated in the previous Report are now projected for 2020 and 2021 because of the lower fiscal deficit currently projected for each year. In addition to this, the financing sources for 2020 and 2021 have also been revised with respect to the September projections due to the new global bonds (US$ 4 billion) issued in November, which will modify the path of use of deposits in both years.

Three global bonds for a total of US$ 4 billion, with maturities in 2032, 2060 and 2121, were issued on November 23. These bonds obtained coupon rates of 1.86, 2.78 and 3.23 percent, respectively, as well as spreads at historic low levels in primary international markets. It is worth mentioning that the bond maturing in over 100 years is the longest-term security issued by Peru, the previous longest-term bond (40 years) having been placed in 2010 (global bond 2050) at a coupon rate of 5.63 percent.

The auction's book of proposals reached US$ 15 billion, while the demand at the close of the auction amounted to US$ 11.50 billion, of which 93 percent corresponded to non-resident investors (44 percent from the United States, 32 percent from Europe, and 24 percent from other regions such as Asia, North America, and Latin America). It should be pointed out that the 2060 and 2121 bonds were placed under par and that only the 2032 bond was issued at par. With these placements, the yield curve on Peru's global bonds has increased in its average residual term from 11.4 to 28.4 years.

Table 29

PLACEMENT OF GLOBAL BONDS IN THE INTERNATIONAL MARKET

(Million US$)

	Global 2032	Global 2060	Global 2121
Auction Date	23-Nov-20	23-Nov-20	23-Nov-20
Date of issue	1-Dec-20	1-Dec-20	1-Dec-20
Date of expiration	1-Dec-32	1-Dec-60	28-Jul-21
Time	12 years	40 years	100 years
Market	International		
Demand	$11,500		
Price	100.000	98.855	98.586
Yield rate	1.862	2.828	3.278
Spread	100	125	170
Credit Rating			
- Moodys		A3	
- Fitch		BBB+	
- S&P		BBB+	
	Global 2032	**Global 2060**	**Global 2121**
Guide Rate *	Treasury + 105 p.b.	Treasury + 130 p.b.	Treasury + 175 p.b.
Treasury rate **	0.86	1.58	1.58
Global Bond Rate ***	2.28		
Sovereign Bond Rate	4.31	5.65	
Spread on Treasury	100	125	170

* The initial guide rate or Initial Price Talk (IPT) is the rate that the issuer considers that investors should offer. It is the maximum rate that the issuer is willing to pay. It can be expressed as a rate or a spread.
** For 40 and 100-year bonds, the reference is the United States Treasury bond that matures in 2050.
*** Implicit rate of a Peruvian global bond.

By way of comparison, we can contrast the rates of the placement of global bonds from other countries with the rates of the secondary market in dollars at similar terms: i) 12-year bonds: Chile has a lower spread with respect to the equivalent American Treasury bond, due to its better credit rating, while the spreads in Colombia and Mexico are significantly higher; ii) 40-year bonds: the bonds of Mexico and the Dominican Republic are traded with spreads above the new Peruvian bond; and iii) 100-year bonds: Mexico has a higher rate than Peru, while Israel, with a better credit rating, has a higher rate with a spread of 177 basis points.

Graph 64

YIELD RATE OF THE SECONDARY MARKET

LATAM Rate for 12 years

	Tasa	*Spread*	*Rating*
Chile 2032	1.83	97	A-
Colombia 2031	2.50	164	BBB-
Mexico 2032	2.88	202	BBB-
Peru 2032	**1.86**	**100**	**BBB+**

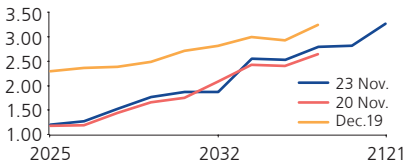
LATAM Rate for 40 years

	Tasa	*Spread*	*Rating*
Dominican Republic 2060	5.64	406	BB-
Mexico 2061	3.78	220	BBB-
Peru 2060	**2.83**	**125**	**BBB+**

100-year rates

	Tasa	*Spread*	*Rating*
Mexico 2110	4.58	300	BBB-
Israel 2120	3.35	177	A+
Peru 2121	**3.28**	**170**	**BBB+**

Global Bond Yield Curve (%)



According to Emergency Decree No. 051-2020, the resources obtained through this issuance will finance expenses associated with the prevention and containment of COVID-19, economic reactivation, and the expenses foreseen in the Public Sector Budget for Fiscal Year 2020, all of which were affected by lower income due to the effects of COVID-19.

Table 30

FINANCIAL REQUIREMENT AND FINANCING OF THE NON-FINANCIAL PUBLIC SECTOR

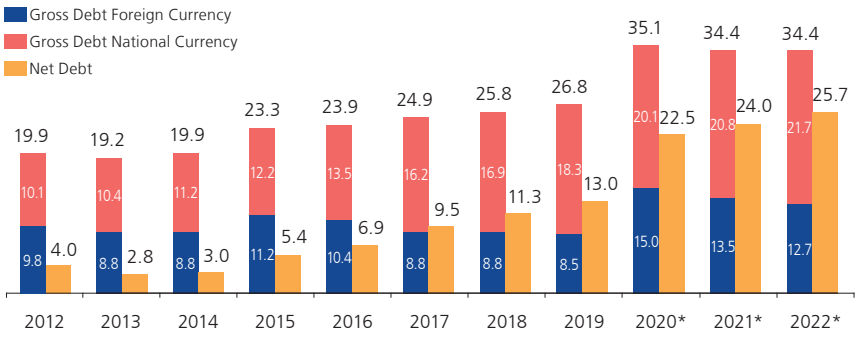
(Million soles)

	2019	2020*			2021*		2022*
		Jan.-Nov.	IR Sep.20	IR Dec.20	IR Sep.20	IR Dec.20	IR Dec.20
I. USES	**32,022**	**45,753**	**66,347**	**63,102**	**42,545**	**38,827**	**29,452**
1. Amortization	19,491	2,429	2,658	2,677	2,883	2,935	3,495
a. External	4,524	849	1,005	1,016	1,783	1,835	2,599
b. Internal	14,967	1,580	1,653	1,662	1,100	1,100	897
Of which: recognition bond	*622*	*420*	*462*	*449*	*550*	*550*	*550*
2. Economic result	12,531	43,324	63,689	60,425	39,662	35,892	25,956
(negative sign indicates surplus)							
II. SOURCES	**32,022**	**45,753**	**66,347**	**63,102**	**42,545**	**38,827**	**29,452**
1. Disbursements and others	36,704	21,634	29,600	37,364	34,655	34,655	19,911
a. External	3,709	8,542	10,700	9,322	7,119	7,327	2,511
b. Bonds	32,995	13,092	18,900	28,042	27,536	27,328	17,400
2. Variation in deposits and others 1/	-4,682	24,119	36,747	25,738	7,890	4,172	9,540
Note:							
Percentage of GDP							
Gross public debt balance 2/	26.8	32.5	34.3	35.1	34.8	34.4	34.4
Net public debt balance 2/	13.0	20.2	22.8	22.5	25.6	24.0	25.7
Balance of public deposits 2/	13.8	12.2	11.4	12.6	9.2	10.3	8.7

1/ Positive sign indicates reduction of deposits.
2/ The Jan-Nov column. corresponds to the balance as of November.
* Forecast.
IR: Inflation Report.

The projected **gross debt** of the non-financial public sector would increase from 34.3 percent (previous Report) to 35.1 percent of GDP in 2020 as a result of the issuance of new bonds for a total of US$ 4 billion, while in 2021 and 2022 the gross debt would represent 34.4 percent of GDPt. On the other hand, as a result of the projected fiscal deficits, following the evolution of gross debt and the use of deposits, the **net debt** would increase from 13.0 to 22.5 percent of GDP between 2019 and 2020, and would register 25.7 percent of the output at the end of the forecast horizon.

Graph 65
NON-FINANCIAL PUBLIC SECTOR DEBT: 2013 - 2022
(% GDP)

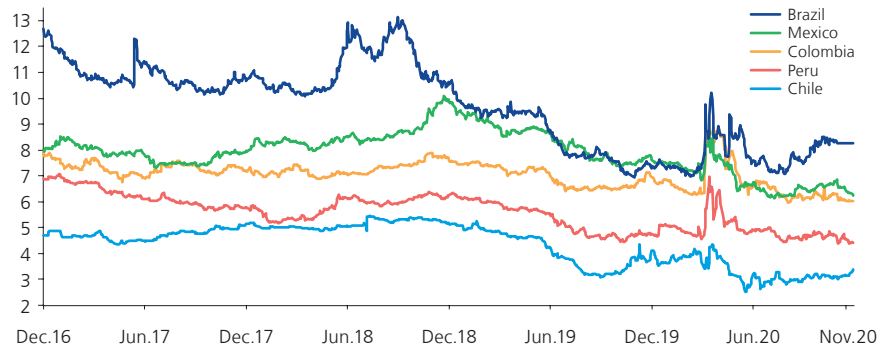


* Forecast.

54. In the market of government bonds in domestic currency, the interest rates on 10-year bonds in Brazil, Chile, Colombia, Mexico, and Peru showed different behaviors between September and November 2020. On the one hand, interest rates fell 38 basis points on average in Colombia, Mexico and Peru, while the rates increased by 15 and 27 basis points in Brazil and Chile, respectively.

The interest rate on the Peruvian 10-year bond has fallen from 4.33 to 3.89 percent so far in the fourth quarter, but showed high volatility between November 9 and 16 due to the presidential impeachment. Non-resident investors continue demanding sovereign bonds and their participation has increased from 49 to 53 percent between December 2019 and November 2020.

Graph 66
10 YEAR SOVEREIGN BONDS YIELD IN LOCAL CURRENCY
(%)



Source: Reuters.

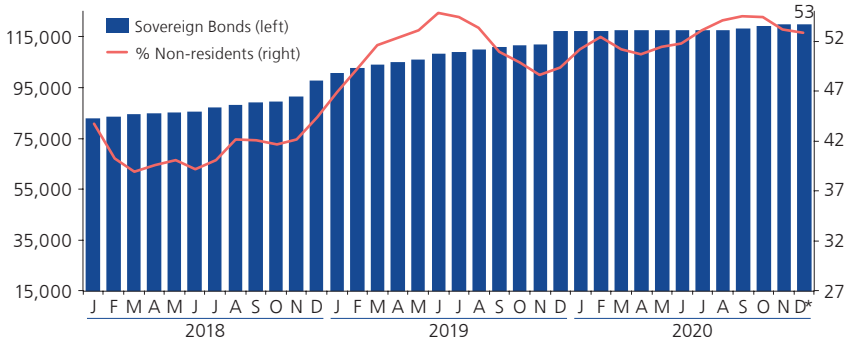
So far in the fourth quarter of 2020, Mexico and Peru have placed bonds in the international market for a total of US$ 6.60 billion and US$ 4 billion, respectively, their maturity terms ranging from 11 to 100 years.

The balance of **sovereign bonds** amounted to S/ 120.12 billion as of December 16, 2020. On the demand side, the participation of non-resident investors decreased from 54 to 53 percent of the bond balance between August and 16 December of this year, with which these holdings decreased from S/ 63.72 to S/ 63.66 billion.

Graph 67

SOVEREIGN BOND BALANCE AND PARTICIPATION OF NON-RESIDENT INVESTORS

(Amounts in millions of soles and participation in percentage)



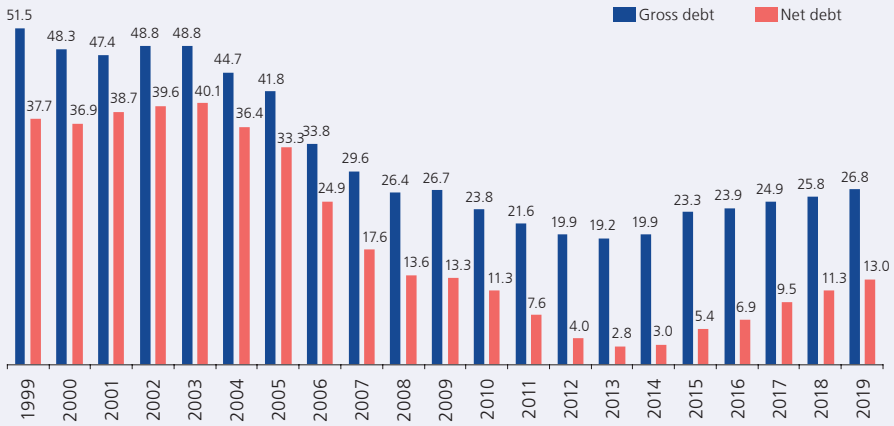
* As of December 16.
Note: Excludes inflation-indexed bonds and GDNs and transactions in Euroclear from residents.
Source: BCRP, CAVALI, MEF, SBS.

Box 5
DECOMPOSITION OF THE EVOLUTION OF PUBLIC DEBT

This box analyzes the equation of the accumulation of gross debt to carry out an exercise aimed at determining which changes in public debt are associated with factors related to government decisions (such as the primary deficit of the public sector and the accumulation or use of financial assets) and which factors automatically affect the ratio of public debt to GDP, such as the cost of fiscal financing, GDP growth, and exchange rate variations.

Public debt as a percentage of GDP has decreased significantly from the beginning of this century until 2013, after which it has been gradually increasing.

BALANCE OF GROSS AND NET PUBLIC DEBT
(% GDP)



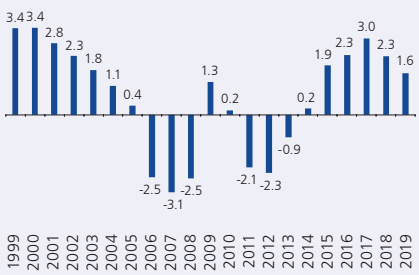
During these years, in addition to reducing the gross debt, the government accumulated assets so the net debt decreased more than the gross debt and reached a minimum level of 2.8 percent of GDP in 2013.

This lower level of indebtedness has been accompanied by extensions in the average maturity term of the debt. As a result, the average life of the debt has increased from 8.0 years at the end of 2001 to 12.2 years at the end of 2019. A longer average debt life implies lower refinancing risk because debt repayment is concentrated in long terms.

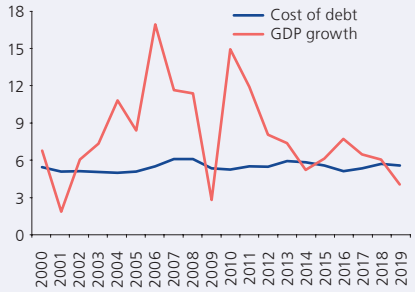
Moreover, the proportion of domestic currency in the debt balance has increased substantially, from 6.3 percent at the end of 2000 to 63.6 percent as of December 2019, and the proportion of the debt at a fixed rate has risen from 32.9 to 90.0 percent in the same period, which reflects the development of the market of sovereign and global bonds. A higher proportion of government liabilities in soles and at a fixed rate reduces the impact of foreign exchange rate and interest rate fluctuations on public finances.

These developments in the balance of government liabilities were favored by factors such as a lower fiscal deficit and a period of high growth, which led to a reduction in the public debt-to-GDP ratio. The fiscal deficit decreased during the first five years of the 21st century, after which fiscal surpluses were registered until 2013 (with the exception of the years in which the fiscal balance was affected by the impact of the Global Financial Crisis). In addition, GDP grew at a higher rate than the cost of public debt (measured by the implicit interest rate on the debt balance) from 2002 to 2013 (with the exception of 2009, when the pace of economic growth was affected by the financial crisis).

ECONOMIC DEFICIT OF THE PUBLIC SECTOR NON-FINANCIAL
(% GDP)



COST OF DEBT AND GDP GROWTH RATE
(Nominal percentages)



Decomposition of changes in the gross public debt

The following accounting equation for the accumulation of gross public debt is used as a percentage of GDP in this calculation:

$$\Delta d_t = dp_t + \Delta a_t + \frac{\tilde{r}_t}{1+\gamma_t} d_{t-1} - \frac{\gamma_t}{1+\gamma_t}(d_{t-1} - a_{t-1}) + \varepsilon_t \left(\frac{\alpha_{t-1} d_{t-1} - \beta_{t-1} a_{t-1}}{1+\gamma_t}\right) - o_t$$

where (d_t) is the gross debt-to-GDP ratio at the end of the period, (dp_t) is the primary deficit of the public sector, (a_t) is the level of public sector assets, ($\tilde{r}_t$) is the implicit nominal interest rate on public debt, (γ_t) is the growth rate of nominal GDP, (ε_t) is the variation rate of the nominal exchange rate, (α_t and β_t) are the share of liabilities and assets in foreign currency over total liabilities and assets, respectively, and (o_t) are other flows that finance the government, such as privatization contracts, for example.

The above equation allows **decomposing** the change in public debt into the following factors:

$dp_t + \Delta a_t$: correspond to debt flows associated with the decisions of the fiscal authority regarding its primary deficit and the accumulation of assets.

$\frac{\tilde{r}_t}{1+\gamma_t} d_{t-1}$: corresponds to the debt flow resulting from the cost of public debt.

$\frac{\gamma_t}{1+\gamma_t}(d_{t-1} - a_{t-1})$: this flow represents the impact of GDP growth on the ratio of public debt and public assets.

$\varepsilon_t \left(\frac{\alpha_{t-1} d_{t-1} - \beta_{t-1} a_{t-1}}{1+\gamma_t}\right)$: measures the impact of changes in the exchange rate on gross public debt, which affect both public assets and liabilities.

o_t: represents other flows.

The table below summarizes the results obtained by applying the previous equation to decompose the changes in public debt for each year in the period 2000-2019, and accumulates the debt changes in some relevant periods:

NON-FINANCIAL PUBLIC SECTOR DEBT
(% GDP)

		1999	2000-2003	2004-2014	2015-2019
1.	**Gross debt balance (end of period)**	**51.5**	**48.8**	**19.9**	**26.8**
2.	**Change in debt ratio**		**-2.6**	**-28.9**	**6.9**
	a. Factors associated with government decisions		**-4.2**	**-18.8**	**2.0**
	i. Primary Deficit		0.8	-26.9	5.1
	Structural primary		0.1	-11.6	3.8
	Cyclical components		0.6	-15.3	1.3
	ii. Change in assets		-5.0	8.1	-3.1
	b. Automatic debt flows		**1.2**	**-7.1**	**4.3**
	i. Interest rate		9.5	16.8	6.1
	ii. GDP growth rate		-7.9	-20.3	-2.0
	Impact on gross debt		*-10.1*	*-31.5*	*-6.7*
	Impact on assets		*2.2*	*11.3*	*4.7*
	iii. Exchange Rate Variation		-0.4	-3.6	0.1
	c. Other flows		**0.4**	**-3.0**	**0.6**

The public debt declined to a lesser extent (2.6 points of GDP) between 1999 and 2003 because automatic factors (high interest rates and low growth rates) contributed to limit debt reduction, even though the government maintained low primary deficits and used assets during that period. It should also be pointed out that the primary deficit did not register lower levels due to a weak economic cycle.

Public debt registered a significant reduction (28.9 points of GDP) between 2004 and 2014. During this period, factors associated with treasury decisions, such as the structural primary balance and the accumulation of assets, contributed to reduce the debt in each year of this period (except in 2009 due to the financial crisis) as a result of the (conventional and structural) fiscal surpluses accumulated in those years. Fiscal efforts were also supported by automatic factors (GDP growth and exchange rate variation) that favored debt reduction. In addition, in this period the country's credit rating increased by 4 levels and reached investment grade in 2008 (BBB- rating assigned by Fitch agency). Since 2013, the country rating has remained at BBB+ for both Fitch and Standards and Poor's, while Moody's has assigned it a rating of A3, one level above the rating assigned by the other two agencies and 6 levels above its 2004 rating.

Between 2015 and 2019, public debt has increased by 6.9 points of GDP, which reflects the accumulation of primary deficits as well as automatic flows (negative output gap and lower commodity prices) that have favored an increase in public debt. This is associated with a lower growth rate, with respect to the cost of debt, which tends to increase the debt balance.

Outlook

The 2020-2022 fiscal scenario in this Report considers a gradual reduction of the fiscal deficit as from 2021. On the other hand, the deficit in 2020 would reach 8.6 percent of GDP due to the adverse impact of the economic contraction generated by the quarantine decreed to mitigate the health impact of the COVID-19 pandemic and due to the increased expenditure required to strengthen health services and transfer funds to families and companies in the midst of the crisis. The deficit would decrease to 4.4 percent of GDP in 2021 and to 3.0 percent of GDP in 2022, reflecting the recovery of income associated with a more dynamic economy and with the conclusion of the spending measures implemented during the pandemic.

In this scenario, public debt would increase to 35.1 percent of GDP in 2020, declining thereafter to 34.4 percent of GDP at the end of 2022.

The following table shows a scenario of gradual fiscal consolidation that allows the deficit to decline to 1 percent of GDP as from 2025. If the deficit remains at this level until the end of the decade, the public debt would once again fall below 30 percent of GDP by 2029.

NON-FINANCIAL PUBLIC SECTOR DEBT
(% GDP)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1. Gross debt balance (end of period)	**26.8**	**35.1**	**34.4**	**34.4**	**34.3**	**33.8**	**32.8**	**32.0**	**31.1**	**30.4**	**29.7**	**28.9**
2. Change in debt ratio	**1.0**	**8.3**	**-0.7**	**0.1**	**-0.2**	**-0.5**	**-1.0**	**-0.9**	**-0.8**	**-0.7**	**-0.7**	**-0.7**
a. Factors associated with government decisions	**-0.5**	**5.7**	**0.6**	**-0.3**	**-0.4**	**-0.6**	**-1.1**	**-1.0**	**-1.0**	**-0.8**	**-0.8**	**-0.8**
i. Primary Deficit	0.2	6.9	2.8	1.3	0.8	-0.2	-0.7	-0.6	-0.6	-0.5	-0.5	-0.5
ii. Change in assets	-0.7	-1.2	-2.2	-1.6	-1.2	-0.4	-0.4	-0.4	-0.4	-0.3	-0.3	-0.3
b. Automatic debt flows	**0.9**	**3.1**	**-1.5**	**0.3**	**0.2**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**
i. Interest rate	1.4	1.6	1.6	1.7	1.7	1.7	1.7	1.6	1.6	1.5	1.5	1.5
ii. GDP growth rate	-0.4	1.2	-2.9	-1.3	-1.5	-1.5	-1.5	-1.5	-1.5	-1.4	-1.4	-1.4
Impact on gross debt	*-1.0*	*2.4*	*-4.6*	*-1.9*	*-2.0*	*-2.0*	*-1.9*	*-1.9*	*-1.8*	*-1.8*	*-1.7*	*-1.7*
Impact on assets	*0.6*	*-1.2*	*1.6*	*0.6*	*0.5*	*0.4*	*0.4*	*0.4*	*0.4*	*0.3*	*0.3*	*0.3*
iii. Exchange Rate Variation	-0.1	0.3	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
c. Other flows	**0.6**	**-0.6**	**0.1**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Note:												
Public Sector Economic Deficit	1.6	8.6	4.4	3.0	2.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0
Public Assets	13.8	12.6	10.3	8.7	7.5	7.1	6.7	6.3	5.9	5.6	5.3	5.0
Net Debt	13.0	22.5	24.0	25.7	26.8	26.7	26.2	25.7	25.2	24.8	24.4	24.0

This scenario assumes a real GDP growth rate of 4 percent in the 2023-2030 period, a nominal exchange rate in line with an inflation rate of 2 percent, and a stable debt

financing cost. It is also assumed that the government will use public deposits until 2023.

In other words, the scenario assumes that the debt management and the management of government's financial will be aimed to cover the treasury's operations, reducing the vulnerability of fiscal accounts to market risks associated with a high level of debt. Thus, the projection takes into account that there is still a significant level of public resources, which at the end of 2020 are estimated at 12.6 percent of GDP.

The table shows that automatic debt flows, associated with the cost of debt, the exchange rate, and GDP growth would not play a significant role in adjusting the level of public debt. Thus, most of the adjustment would depend on the Treasury's ability to generate moderate primary surpluses as of 2024, an outcome that is within the range of recent historical experience in Peru.

The following table illustrates the sensitivity of the debt dynamics to the growth assumption used in the forecast scenario. If GDP continues to show a growth rate 1 point above the baseline scenario (5 percent) in 2023-2030, automatic debt flows would have a greater impact on debt dynamics and the fiscal adjustment required would be lower. This implies not only that lower primary surpluses are required in the forecast horizon, but also a lower level of debt by 2030 compared to the baseline scenario.

NON-FINANCIAL PUBLIC SECTOR DEBT
(% GDP)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1. Gross debt balance (end of period)	**26.8**	**35.1**	**34.4**	**34.4**	**34.2**	**33.4**	**32.3**	**31.1**	**30.1**	**29.1**	**28.2**	**27.3**
2. Change in debt ratio	**1.0**	**8.3**	**-0.7**	**0.1**	**-0.2**	**-0.8**	**-1.2**	**-1.2**	**-1.0**	**-1.0**	**-0.9**	**-0.9**
a. Factors associated with government decisions	**-0.5**	**5.7**	**0.6**	**-0.3**	**-0.2**	**-0.7**	**-1.1**	**-1.0**	**-0.9**	**-0.9**	**-0.8**	**-0.7**
i. Primary Deficit	0.2	6.9	2.8	1.3	0.8	-0.2	-0.6	-0.6	-0.5	-0.5	-0.4	-0.4
ii. Change in assets	-0.7	-1.2	-2.2	-1.6	-1.0	-0.5	-0.5	-0.4	-0.4	-0.4	-0.4	-0.3
b. Automatic debt flows	**0.9**	**3.1**	**-1.5**	**0.3**	**0.0**	**-0.1**	**-0.1**	**-0.1**	**-0.1**	**-0.1**	**-0.1**	**-0.1**
i. Interest rate	1.4	1.6	1.6	1.7	1.7	1.7	1.6	1.6	1.5	1.5	1.4	1.4
ii. GDP growth rate	-0.4	1.2	-2.9	-1.3	-1.7	-1.8	-1.7	-1.7	-1.6	-1.6	-1.6	-1.5
Impact on gross debt	*-1.0*	*2.4*	*-4.6*	*-1.9*	*-2.3*	*-2.3*	*-2.2*	*-2.1*	*-2.1*	*-2.0*	*-1.9*	*-1.9*
Impact on assets	*0.6*	*-1.2*	*1.6*	*0.6*	*0.6*	*0.5*	*0.5*	*0.4*	*0.4*	*0.4*	*0.4*	*0.3*
iii. Exchange Rate Variation	-0.1	0.3	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
c. Other flows	**0.6**	**-0.6**	**0.1**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Note:												
Public Sector Economic Deficit	1.6	8.6	4.4	3.0	2.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0
Public Assets	13.8	12.6	10.3	8.7	7.7	7.2	6.7	6.3	5.9	5.5	5.1	4.8
Net Debt	13.0	22.5	24.0	25.7	26.5	26.2	25.6	24.8	24.2	23.6	23.1	22.5

These exercises point to the need to carry out reforms in the main factor and financial markets to promote higher potential GDP growth in the medium term, which would not only favor the consolidation of the public debt, but would also allow the government to have greater resources to provide goods and services to the country.

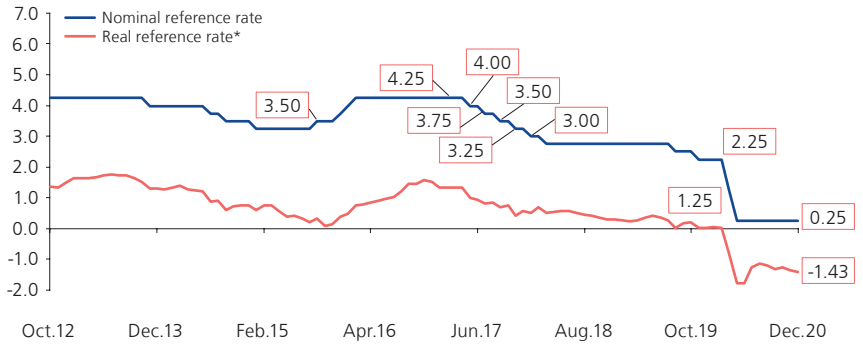
V. Monetary Policy and Financial Conditions

Monetary policy actions

55. Since March, BCRP has taken unprecedented monetary and financial measures to contribute to ensure the proper functioning of markets and offset a deep economic contraction associated with the application of extreme confinement measures in response to COVID-19. The focus of these measures has been to reduce the cost of financing, provide liquidity to the financial system, and reduce volatility in long-term interest rates and the foreign exchange rate.

On the one hand, since April BCRP has maintained a record low benchmark interest rate of 0.25 percent, which in December is equivalent to a negative real rate of 1.43 percent. On the other hand, given the magnitude of the shock associated with the pandemic, other monetary policy instruments have also been used to expand the monetary impulse.

Graph 68
REFERENCE INTEREST RATE
(%)



* With expectation of inflation.

56. Recent monetary decisions have been made in light of the following factors:

- Inflation in 2020 would lie at the center of the target range due to transitory factors and in 2021, inflation is expected to be in the lower part of the target range as domestic demand, although in recovery, will remain low.
- One-year ahead inflation expectations and trend inflation indicators are in the lower part of the target range.
- Leading indicators continued to improve, even at a higher rate than expected in October, although they remain below last year's levels, while firms' growth expectations continued to recover between September and November.
- Global economic activity has been improving, but remains below last year's levels.

57. In order to enhance the transmission of monetary policy, the Board of BCRP approved new facilities in December, including Security Repos in Exchange of Domestic Currency with Negotiable Invoices (registered in CAVALI) as collateral, which expand the scope of liquidity injection to financial entities. This instrument facilitates short-term financing for companies, which is useful to replace working capital.

On the other hand, BCRP has created two other monetary instruments conditional on the expansion of long-term credit in domestic currency: a repo operations window and auctions of term interest Rate Swaps. Moreover, BCRP will continue to carry out the monetary operations it deems necessary to ensure the proper functioning of the local financial markets.

58. In terms of communication, the BCRP Board of Directors has emphasized that "*it considers it appropriate to maintain a strongly expansionary monetary stance for a prolonged period of time and while the negative effects of the pandemic on inflation and its determinants persist*." In this way, BCRP has given guidelines on the future monetary policy stance, providing more information to the market for the formation of expectations. BCRP has also indicated that "it stands ready to extend the monetary stimulus under different modalities."

59. The communication of monetary policy reinforces its transmission channels to the economy, and contributes to anchor inflation expectations around the target if such communication generates a favorable macroeconomic environment, with less uncertainty and greater business confidence.

After the international financial crisis of 2008-2009, several central banks have put into practice the use of *forward guidance*, which is the information included in the monetary policy statement to signal the future actions of central banks in the forecast horizon.

FORWARD GUIDANCE OF CENTRAL BANKS 1 /

Central Bank	Date	Rate (%)	Decision	*Forward Guidance*	Next Meeting
Federal Reserve of the United States (Fed)	16/12/2020	0.25	Mantener	The Committee seeks to achieve maximum employment and inflation at the rate of,2 percent over the longer run. With inflation running persistently below this longer-run goal. the Committee will aim to achieve inflation moderately above,2 percent for some time so that inflation averages,2 percent over time and longer-term inflation expectations remain well anchored at,2 percent. The Committee expects to maintain an accommodative stance of monetary policy until these outcomes are achieved. The Committee decided to keep the target range for the federal funds rate at,0 to,1/4 percent and expects it will be appropriate to maintain this target range until labor market conditions have reached levels consistent with the Committee's assessments of maximum employment and inflation has risen to,2 percent and is on track to moderately exceed,2 percent for some time	26/01/2021
European Central Bank (ECB)	10/12/2020	0.00	Hold	The Governing Council expects the key ECB interest rates to remain at their present or lower levels until it has seen the inflation outlook robustly converges to a level sufficiently close to, but below, 2 per cent within its projection horizon, and such convergence has been consistently reflected in underlying inflation dynamics.	21/01/2021
England Bank (BoE)	17/12/2020	0.10	Hold	The MPC will continue to monitor the situation closely. If the outlook for inflation weakens, the Committee stands ready to take whatever additional action is necessary to achieve its remit. The Committee does not intend to tighten monetary policy at least until there is clear evidence that significant progress is being made in eliminating spare capacity and achieving the 2% inflation target sustainably.	04/02/2021
Bank of Japan (BoJ)	18/12/2020	-0.10	Hold	The Bank will continue with "Quantitative and Qualitative Monetary Easing (QQE) with Yield Curve Control,"aiming to achieve the price stability target of 2 percent, as long as it is necessary for maintaining that target in a stable manner. It will continue expanding the monetary base until the year-on-year rate of increase in the observed consumer price index (CPI, all items less fresh food) exceeds 2 percent and stays above the target in a stable manner.	20/01/2021
Bank of Canada (BoC)	09/12/2020	0.25	Hold	Canada's economic recovery will continue to require extraordinary monetary policy support. The Governing Council will hold the policy interest rate at the effective lower bound until economic slack is absorbed so that the 2 percent inflation target is sustainably achieved. In our October projection, this does not happen until into 2023. To reinforce this commitment and keep interest rates low across the yield curve, the Bank will continue its QE program until the recovery is well underway and will adjust it as required to help bring inflation back to target on a sustainable basis. We remain committed to providing the monetary policy stimulus needed to support the recovery and achieve the inflation objective.	20/01/2021
Central Bank of Brazil	09/12/2020	2.00	Hold	The Committee deems as adequate the current level of unusually strong monetary stimulus, which is being provided by the maintenance of the policy rate at 2.00% p.a. and the forward guidance introduced in the 232nd meeting. The forward guidance stated that the Copom does not intend to reduce the monetary stimulus as long as specified conditions are met. The Committee judges that those conditions continue to hold. In spite of having increased since the last meeting, in particular for 2021, inflation expectations, as well as inflation projections for its baseline scenario, are still below the inflation target for the relevant horizon for monetary policy; the current fiscal regime has not been changed; and long-term inflation expectations remain well anchored.	19/01/2021
Central bank of Chile (BCCh)	07/12/2020	0.50	Hod	The Council reiterates that it will maintain a high monetary momentum for a period prolonged period of time, in order to ensure the consolidation of recovery economic and the fulfillment of its objectives. In particular, it foresees that the TPM will remain at its lowest level for much of the monetary policy horizon two years. Unconventional measures will continue to apply. This considers that the total stock of bank bonds acquired under different programs - about US $ 8 billion - will be maintained for the next six months, reinvesting the coupons that expire. This excludes purchases carried out under the CC-VP program. In relation to the FCIC, the Council decided not introduce changes in the total of available resources and the conditions for their utilization. However, it will evaluate its possible extension and changes in the parameters of access that facilitate its use to respond to the needs of the economy in this stage.	26/01/2021
Central Bank of Mexico (Banxico)	17/12/2020	4.25	Hold	The Governing Board will take the actions it deems necessary based on the additional information, so that the reference rate is consistent with the orderly and sustained convergence of headline inflation to the Banco de Mexico in the term in which the monetary policy operates. Also, it is imperative safeguard the institutional environment, strengthen macroeconomic fundamentals and adopt the necessary actions in the monetary and fiscal spheres, to promote a better adjustment of national financial markets and the economy in its set.	11/02/2021
Central Bank of Peru	10/12/2020	0.25	Hold	The Board considers it appropriate to maintain a strong monetary stance expansive for a prolonged period and as long as the negative effects of the inflation pandemic and its determinants. The Central Bank is attentive to expanding the monetary stimulus under different modalities.	14/01/2021

1/ As of December 17.

For example, in their recent monetary policy statements, the central banks of developed economies such as the Fed or the European Central Bank (ECB) have stated that they will maintain monetary stimulus as long as certain macroeconomic conditions persist or certain reference levels are reached.

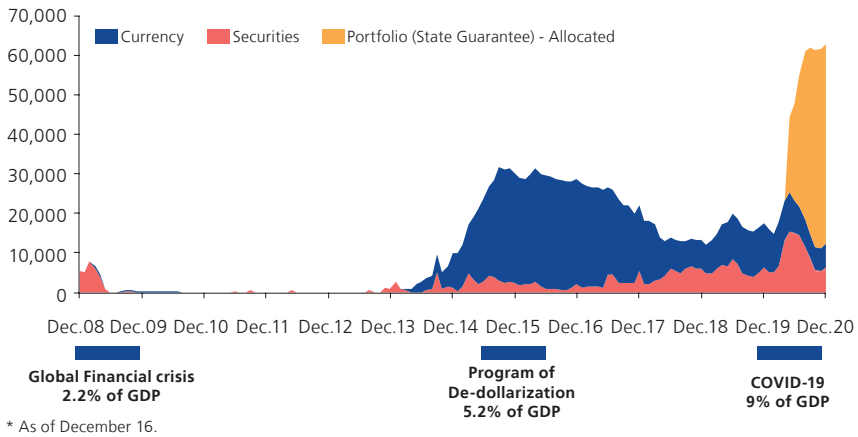
- The **Fed** "will aim to achieve inflation moderately above 2 percent for some time, so that inflation averages 2 percent over time and longer-term inflation expectations remain well anchored at 2 percent. (It) expects to maintain an accommodative stance of monetary policy (…) and expects it will be appropriate to maintain this target range until labor market conditions have reached levels consistent with the Committee's assessments of maximum employment and inflation has risen to 2 percent and is on track to moderately exceed 2 percent for some time".

- The **ECB** expects "key ECB interest rates to remain at their present or lower levels until it has seen the inflation outlook robustly converge to a level sufficiently close to, but below, 2 per cent within its projection horizon, and such convergence has been consistently reflected in underlying inflation dynamics.

Additional measures of BCRP in response to the COVID-19 pandemic

60. As of December 16, BCRP's injection operations totaled S/ 62.9 billion (9.0 percent of GDP), of which S/ 12.2 billion are security repos, currency repos, and portfolio repos, and S/ 50.6 billion is the liquidated amount of government-backed credit repos.

Graph 69
BALANCE OF REPO OPERATIONS*
(Million soles)



* As of December 16.

61. Between September and December, BCRP continued to carry out the necessary actions to sustain the payments system and the flow of credit in the economy. The balance of liquidity injection operations maintained record levels and increased from S/ 60.9 billion at the end of August to S/ 62.9 billion as of December 16. It is worth mentioning that S/ 50.6 billion of the latter corresponds to repo operations guaranteed by the National Government. Moreover, the total balance of liquidity injection operations (S/ 62.9 billion) is almost eight times higher than the maximum balance that these operations reached during the international financial crisis of 2008-2009 (S/ 7.9 billion) and twice the balance reached during the period of falling commodity prices (2013-2016) and the de-dollarization program (S/ 31.8 billion).

Table 31
BALANCE OF BCRP REPO OPERATIONS*
(Million soles)

Episode	Date	Values	Currency (Regular)	Currency (Expansion)	Currency (Substitution)	Portfolio (General and Alternative)	Government-backed portfolio repo liquidation	Total
	Oct-08	7,383	300	0	0	0	0	7,683
	Nov-08	5,959	30	0	0	0	0	5,989
Financial Crisis 2008-2009	Dec-08	5,412	0	0	0	0	0	5,412
	Jan-09	5,239	0	0	0	0	0	5,239
	Feb-09	7,877	0	0	0	0	0	7,877
	Mar-09	5,989	735	0	0	0	0	6,724
	Dec-14	1,300	8,600	0	0	0	0	9,900
	Mar-15	4,900	8,600	2,200	1,500	0	0	17,200
De-dolarization Program	Jun-15	2,631	11,500	5,100	4,305	0	0	23,536
	Sep-15	3,034	16,050	7,900	4,805	0	0	31,789
	Dec-15	2,500	14,900	7,900	4,805	0	0	30,105
	Feb-20	5,100	9,650	0	0	0	0	14,750
	Mar-20	6,675	11,150	0	0	0	0	17,825
	Apr-20	13,015	10,030	0	0	250	0	23,295
	May-20	15,060	10,145	0	0	260	19,017	44,482
	Jun-20	14,947	8,095	0	0	260	24,338	47,640
COVID-19 crisis	Jul-20	14,452	7,195	0	0	154	33,090	54,891
	Aug-20	11,379	6,895	0	0	250	42,363	60,886
	Sep-20	8,604	5,895	0	0	304	47,002	61,805
	Oct-20	5,359	5,695	0	0	295	49,798	61,146
	Nov-20	5,059	5,970	0	0	269	50,246	61,543
	Dec-20	5,809	5,970	0	0	466	50,626	62,870

* As of December 16.

62. Funds for a total of S/ 55.3 billion were awarded at an average interest rate of 1.40 percent since April 23 and in fifty sessions of auctions of the Reactiva Perú program, which concluded on October 20. To date, over 500 thousand companies have benefited from the loans granted under this program, with loan disbursements associated with the program being expected to continue during the month of December.

Table 32
OPERATIONS AUCTION OF PORTFOLIO REPO WITH GOVERNMENT GUARANTEED

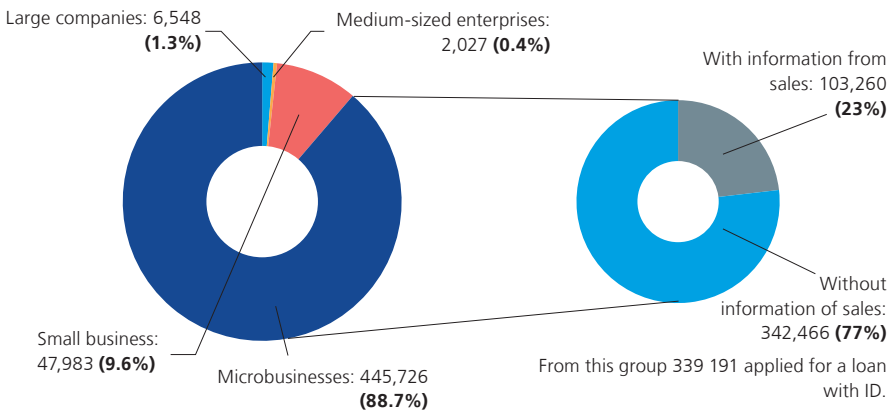
Government Guarantee (%)	Auctioned (Millions S/)	Allocate * (Millions S/)	Interes rate for clients			Allocate* (Percentage)
			Minimun	Maximun	Average	
80	14,400	9,597	0.79	2.15	1.16	17.4
90	37,050	24,275	0.90	2.50	1.21	43.9
95	34,800	14,302	0.54	3.25	1.30	25.9
98	39,079	7,108	0.50	5.25	2.59	12.9
Total	**125,329**	**55,282**	**0.50**	**5.25**	**1.40**	**100.0**

* As of October 20.

Resources were assigned through these operations to 28 financial entities (9 banks, 7 financial institutions, 10 municipal savings banks and 2 rural savings and credit banks), which represent 98 percent of the credit granted by the financial system to companies.

63. According to COFIDE information, the total of government-backed loans granted as of December 11 (S/ 58.09 billion) have benefited 502,284 companies, of which 98.3 percent are small and micro businesses (SME). Moreover, of the total number of micro-enterprises (445,726 companies), 23 percent (103,260 firms) are formal companies (which register sales information), while 77 percent (342,466 firms) do not record sales information and have requested their loans with their ID number (339,191 businesses).

Graph 70
N° OF COMPANIES WITH CREDITS REACTIVA PERU



64. By company size, the share of small, medium, and large enterprises in total loans under the Reactiva Peru program is proportional to their contribution to total sales. Thus, large companies, which contribute 64.0 percent of total sales, have received 48.8 percent of the amount of loans, while small and micro enterprises,

which have contributed 32.9 percent of the sales, have received 46.3 percent of the program loans.

Table 33
REACTIVA CREDITS BY COMPANY SIZE 1 /

	Credit amount		Average sales 2/	
	(Million S/)	Participation (%)	(Million S/)	Participation (%)
Corporate and large companies	28,359	48.8	28,868	64.0
Medium-size enterprises	2,845	4.9	1,399	3.1
Small businesses and Microbusinesses	26,889	46.3	14,832	32.9
Total	**58,094**	**100.0**	**45,099**	**100.0**

1/ Prepared with the information from the guarantee certificates issued by COFIDE as of December 11, 2020. For the classification of the size of The company uses the amount of annual sales according to information from SUNAT. For companies that do not register a sales number, estimated according to the median of the segment to which it belongs.
2/ Sales amounts are consolidated for the case of companies with more than one Reactive credit, that is, sales amounts are considered only once registered of those companies with more than one Reactiva credit.
Note: The criteria to classify the companies is made according to the information from SUNAT:
Small businesses and Microbusinesses: annual sale between 0 to 150 UIT
Small: annual sale between 150 to 1,700 UIT
Median: annual sale between 1 700 to 2 300 UIT
Large Company: annual sale greater than 2300 UIT.

65. The program has had a significant impact on direct employment. The group of companies that have had access to the Reactiva Peru program to date generates 2.8 million jobs, of which 2.0 million are jobs included in the electronic payroll (52.3 percent of private formal employment). In addition, it is estimated that 401 thousand companies generate 825 thousand jobs not registered in the electronic payroll.

Table 34
COMPANIES AND EMPLOYMENT IN REACTIVA PERU 1/

	Companies in Reactiva		Number of Jobs	
	Number	Participación (%)	(Thousand)	Participation (%)
Total	**502,284**	**100**	**2,782**	**100**
With information in payroll	100,980	20.1	1,958	70.4
Without information in payroll 2/	401,304	79.9	825	29.6
With Ruc	57,577	11.5	136	4.9
Without Ruc	343,727	68.4	689	24.8

1/ Elaborated with the information from the Electronic Payroll as of October 2020 and the guarantee issued by COFIDE as of December 11, 2020.
2/ Mainly microbusiness and small companies that do not declare workers in the payroll. For these, the number of jobs has been estimated according to the median of those microbusiness and small companies that do register information on the payroll (2 and 5 positions, respectively).
Source: Sunat and Datamart.

66. It is estimated that companies with up to 10 workers are the ones that have participated the most in the Reactiva Peru program and that they represent 96.2 percent of the total number of companies, 39.1 percent of the total amount of loans, and are responsible for generating 1,1 million jobs (39.1 percent of the total). On the other hand, companies with more than 500 workers, which account for the other third of the total, have had the lowest participation in the Reactiva Peru program (0.1 percent of the total number of companies and 6.7 percent of the total amount of loans).

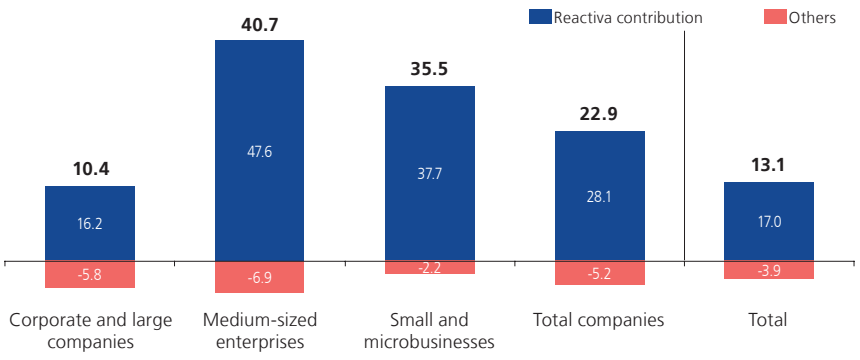
Table 35
REACTIVA CREDITS BY NUMBER OF COMPANY'S WORKERS 1/

	Amount of loans		Number of companies		Jobs	
	(Million S/)	Participation (%)	(Units)	Participation (%)	(Thousand)	Participation (%)
Total	**58,094**	**100.0**	**502,284**	**100.0**	**2,782**	**100.0**
Up to 10 workers	23,857	41.1	483,245	96.2	1,089	39.1
Between 11 and 50 workers	14,938	25.7	14,428	2.9	292	10.5
Between 51 and 100 workers	5,495	9.5	2,060	0.4	147	5.3
Between 101 and 500 workers	9,901	17.0	2,071	0.4	407	14.6
More than 500 workers	3,903	6.7	480	0.1	848	30.5

1/ Elaborated with information from the guarantee issued by COFIDE as of December 11, 2020. Information from the Electronic Payroll corresponding to October 2020 is used for the number of workers. Includes 347 thousand companies without information in the Electronic Payroll. For these companies, 711 thousand workers have been estimated based on the median employment according to company size.
Source: Sunat, SBS y MEF.

67. The Reactiva Peru program has allowed a greater expansion of credit for all business segments. This was noteworthy in October, when credit to the SME segment grew 35.5 percent (-2.2 percent without Reactiva), while credit to medium-sized companies grew by 40.7 percent (-6.9 percent excluding the effect of Reactiva Peru), and loans to large companies and corporations grew by 10.4 percent (-5.8 percent excluding the effect of Reactiva Peru).

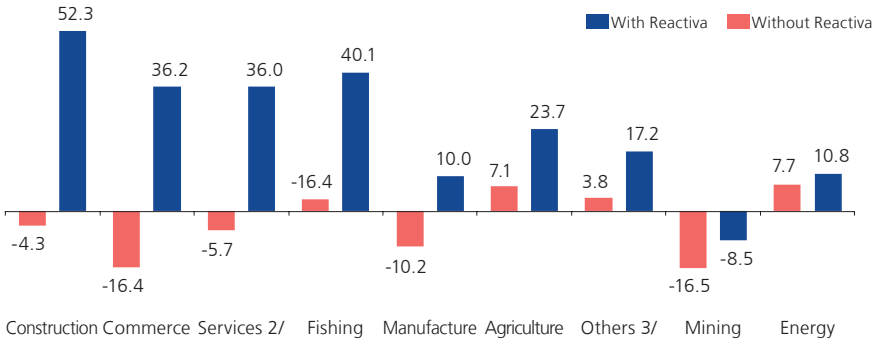
Graph 71
CREDIT GROWTH IN OCTOBER 2020
(Annual % change)



Source: Verification Balances of financial entities.

68. Furthermore, the sectors most affected by the social confinement measures established because of COVID-19 are among those showing the greatest expansion of credit. The highest year-on-year growth of credit was observed in the sectors of construction (52.3 percent), commerce (36.2 percent), services (36.0 percent), and fishing (40.1 percent). Without these Reactiva Peru loans, these sectors would have registered significantly lower growth rates.

Graph 72
GROWTH OF BUSINESS CREDITS BY ECONOMIC SECTOR
(Anual % change) 1/



1/ Preliminary data on the amount of Reactiva Peru credits disbursed by the deposit-creating companies, the which are reported by financial entities. They include only loans to private companies (excluding loans to public companies).
2/ Includes hotels and restaurants, transportation, real estate and business activity, education and social services.
3/ Includes credit to households for business purposes, not sectorized and community services.
Sources: BSI and Trial Balance.

Debt Balance of Program Beneficiaries

69. According to the report entitled Reporte Crediticio Consolidado (RCC)[15], between May and October 2020, the total of Reactiva Peru loans was equivalent, on average, to 63 percent of the total debt balance of the companies at the time when they received their loan, which implies that, on average, businesses more than roughly doubled their credit balance by participating in the program. It is worth mentioning that the program had a greater impact on the debt balance of the micro and small business segment (64 percent), including in several cases firms that had not previously had credit in the financial system

Table 36
REACTIVA PERU: AMOUNT OF REACTIVA LOANS OVER DEBT BALANCE IN THE FINANCIAL SYSTEM 1/

Segment 2/	N° of companies	Amount Reactiva (million S/)	Balance of debt as of July (million S/)	Ratio: Amount of Reactiva loans over total debt balance	
				Average	Median
Corporate and large companies	2,821	18,656	1/73,599	0.53	0.51
Medium-sized enterprises	28,904	20,644	42,883	0.44	0.38
Small and microbusinesses	439,922	18,289	24,742	0.64	0.68
Total	**471,647**	**57,589**	**141,224**	**0.63**	**0.67**

1/ Information on Reactiva Peru loans and Consolidated Credit Report as of October 2020. The companies in the RCC are considered.
2/ According to the SBS classification.
Source: Datamart and RCC.

15 *Reporte Crediticio Consolidado (RCC)* is a monthly report that cointains the debt balances owed by natural and corporate persons to entities of the financial system under supervisión of the Superintendency of Banking and Insurance (SBS).

Credit Inclusion and Loans Granted by Reactiva Perú

70. As of October 2020, a total of 58,658 Reactiva loans (12.4 percent of the total) were granted by financial entities to companies that were not their clients over the last two years. The companies that have taken Reactiva loans from a new entity can be subdivided into two groups: (i) those that have not had credit in any entity at least in the last two years (6.2 percent of Reactiva loans), and (ii) those that did have a loan in this period, but from a financial entity other than the one that granted the Reactiva loan (6.3 percent of the Reactiva loans).

71. In other words, some 29,125 loans from Reactiva Peru were granted by some financial institution to companies that had not had credits in the financial system for at least the last two years. These loans were granted mainly by banks (69 percent), followed by municipal savings banks (20 percent), financial institutions (5 percent), and rural savings banks (5 percent).

Table 37
FINANCIAL INCLUSION OF REACTIVA PERU

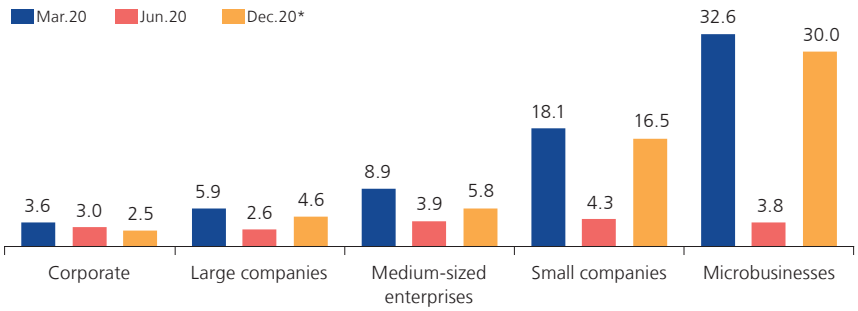
Entities	Credit inclusion by Reactiva Perú 1/		Credit Reactiva Perú in new entities 2/		Total	
	N° loans	Participation (%)	N° loans	Participation (%)	N° loans	Participation (%)
Banks	20,127	69	25,405	86	45,532	78
Financial entities	1,563	5	59	0	1,622	3
CMAC	5,886	20	3,869	13	9,755	17
CRAC	1,549	5	200	1	1,749	3
First loans	29,125	100	29,533	100	58,658	100
(% total Reactiva loans)	6.2		6.3		12.4	

1/ Reactiva loans are considered from companies that have had no credit in the financial system in the last two years.
2/ Reactiva loans are considered from companies that have had some credit in the last two years, but not in the same entity where they obtained the Reactiva loans.
Memo: Information on Reactiva loans and Consolidated Credit Report (RCC) as of October 2020.

72. On the other hand, 29,533 loans were granted by a financial institution other than the one to which the company usually goes to obtain credit. This means that 6.3 percent of the total Reactiva loans made between May and October were granted to companies that had some credit in the financial system (in the last two years), but requested their Reactiva loan from a different financial institution. Moreover, 86 percent of these loans were provided by banks, followed by municipal savings banks (13 percent).

73. The auction mechanism has helped to accelerate the transmission of the reduction in the benchmark rate (currently at its historic low of 0.25 percent) to the rest of the rates in the economy. As of December, the rates show levels below their historical averages.

Graph 73
INTEREST RATE IN DOMESTIC CURRENCY 1/
(%)

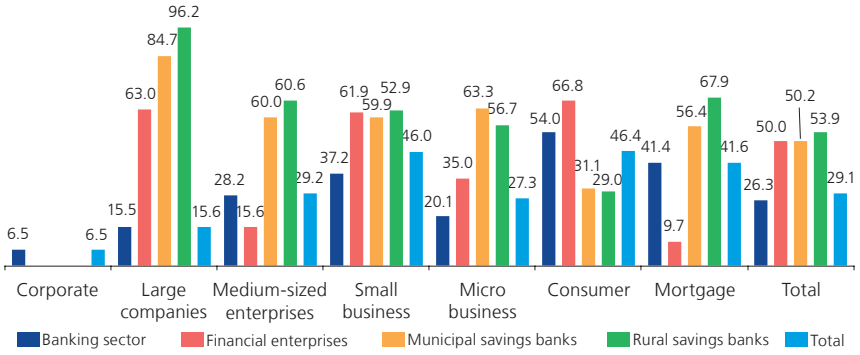


1/ Lending rates in annual terms of operations carried out in the last 30 business days for banking companies.
* Information as of December 17, 2020.
Source: SBS.

74. Since the beginning of mandatory confinement, with the consequent significant drop in income, borrowers have required to reschedule loan payments to the financial system. Many of the loans have been rescheduled automatically by financial institutions, which has helped to prevent discontinuity in the flow of payments in the economy by easing the cash flow of the affected population.

75. According to the SBS information, as of October 31, 2020, depository institutions (which include banks, financial companies, municipal savings banks, and rural banks) have rescheduled loans for around S/ 107 billion (29 percent of the total portfolio of depository institutions), that is, less than in June (S/ 128 billion equivalent to 35.6 percent of the portfolio) because rescheduled loan repayments have already started. As of October, loan rescheduling includes 46 percent of the small business portfolio, 27 percent of the micro-business portfolio, and 46 percent of the consumer portfolio. Furthermore, specialized microfinance entities have rescheduled more than 50 percent of their loan portfolio. This credit rescheduling authorized by SBS has made it possible to contain a possible increase in delinquency rates in the financial system.

Graph 74
RESCHEDULED CREDITS OF DEPOSITARY COMPANIES 1/: OCTOBER 2020
(As % of total credits)



1/ Banking sector, Financial enterprises, Municipal savings banks and Rural savings banks.
Sources: Financial statement of depositary companies.

76. In addition to this, BCRP has been carrying out repos with rescheduled loan portfolios since July 15. Through this instrument, financial entities obtain long term liquidity under favorable conditions when they reschedule the loans granted to their clients at terms between 6 and 48 months and at lower interest rates than those initially agreed. The reduction in the interest rates on rescheduled loans must be at least 20 percent or 200 basis points of the original interest rate on the loan (whichever is higher). As of December 7, the balance of rescheduling repos amounts to S/ 515 million, with portfolio repos under the alternative scheme amounting to S/ 481 million and security repos amounting to S/ 34 million.

77. Law N° 31050, published on October 8, established extraordinary measures that allow individuals and SMEs affected by the state of national emergency as a result of COVID-19 to reschedule the repayment of their loans. These measures basically consist of guarantees granted by the National Government through the COVID-19 Guarantee Program for personal, consumer, mortgage, and car loans, and loans to SMEs. The maximum amount foreseen for these guarantees is S/ 5.5 billion[16].

16 Supreme Decree N° 341-2020/EF dated November 4.

In line with this, the SBS issued Resolution No. 2793-2020, through which a zero percent credit risk provision rate is exceptionally applied to the part of the loans covered by the guarantee of the COVID-19 Guarantee Program.

BCRP Monetary Operations

78. The **operations of the Central Bank** continued to focus on ensuring adequate levels of liquidity in the interbank market between August and November, given that the severe economic contraction caused by the Coronavirus outbreak made it essential to maintain the flow of payments and credit in the economy by injecting liquidity to term through a wide range of monetary instruments, including government backed portfolio repo operations associated with the Reactiva Peru program. Therefore, BCRP injected liquidity through the liquidation of government-backed portfolio repo operations (S/ 7.88 billion) and portfolio repos (S/ 20 million). These operations were offset by the net expiration of security repos (S/ 6.32 billion), currency repos (S/ 925 million), and by the increase in the balances of CDRBCRP (S/ 4.30 billion) and CD BCRP (S/ 3.42 billion).

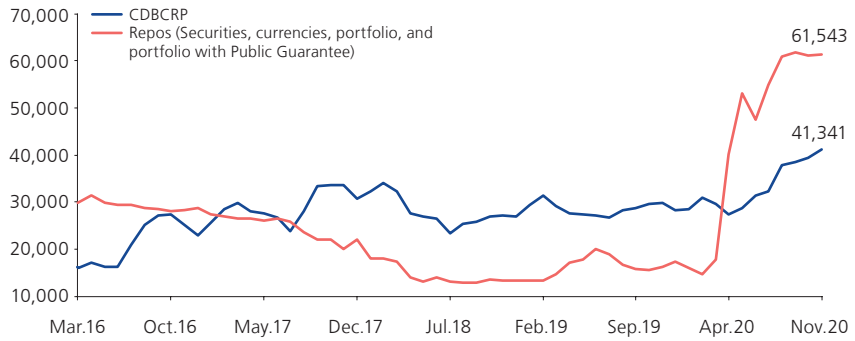
In addition to this, in order to maintain adequate levels of shorter term liquidity, excess liquidity was sterilized through the net placement of time and overnight deposits (S/ 1.68 billion). As a result, the balance of repo operations increased from S/ 60.87 billion in August 2020 to S/ 61.54 billion at the end of November 2020, while the balance of CD BCRP and CDR BCRP increased from S/ 40.93 billion in August to S/ 48.65 billion in November.

Table 38
BALANCE OF BCRP MONETARY OPERATIONS

		Balance (Million S/)			Average interest rate of the balance (%)		
		Dec.19	Aug.20	Nov.20	Dec.19	Aug.20	Nov.20
Monetary sterilization							
1.	CDBCRP	28,365	37,919	41,341	2.50	1.17	0.77
2.	CDRBCRP	0	3,010	7,313	1.00	0.03	0.13
3.	Term and overnight deposits	2,115	37,125	38,800	1.00	0.23	0.23
Monetary injection							
4.	Currency repos	11,050	6,895	5,970	3.85	3.02	2.80
5.	Security repos	6,350	11,379	5,059	3.31	1.49	1.27
6.	Portfolio repos	0	250	269	n.d.	0.62	0.50
7.	Government-backed portfolio repos*	0	42,363	50,246	n.d.	1.38	1.40
8.	Public Treasury fund auctions	4,100	2,500	1,000	3.85	3.51	3.46

* The disbursed amount of the instruments to date is considered.

Graph 75
BALANCE OF REPO OPERATIONS AND CDBCRP
(Balance in mill. S/)



Thus, the balance of repo transactions increased to 19.2 percent of the BCRP's net assets, from 18.7 percent in August 2020. On the side of the BCRP liabilities, the share of public sector deposits decreased to 19.6 percent, from 23 percent in August 2020, while the share of BCRP instruments (CDBCRP, CDRBCRP, and time and overnight deposits) increased their share in the BCRP's net liabilities from 24 percent to 27 percent in this period.

Table 39
SIMPLIFIED BALANCE SHEET OF THE BCRP*
(As % of Net Assets)

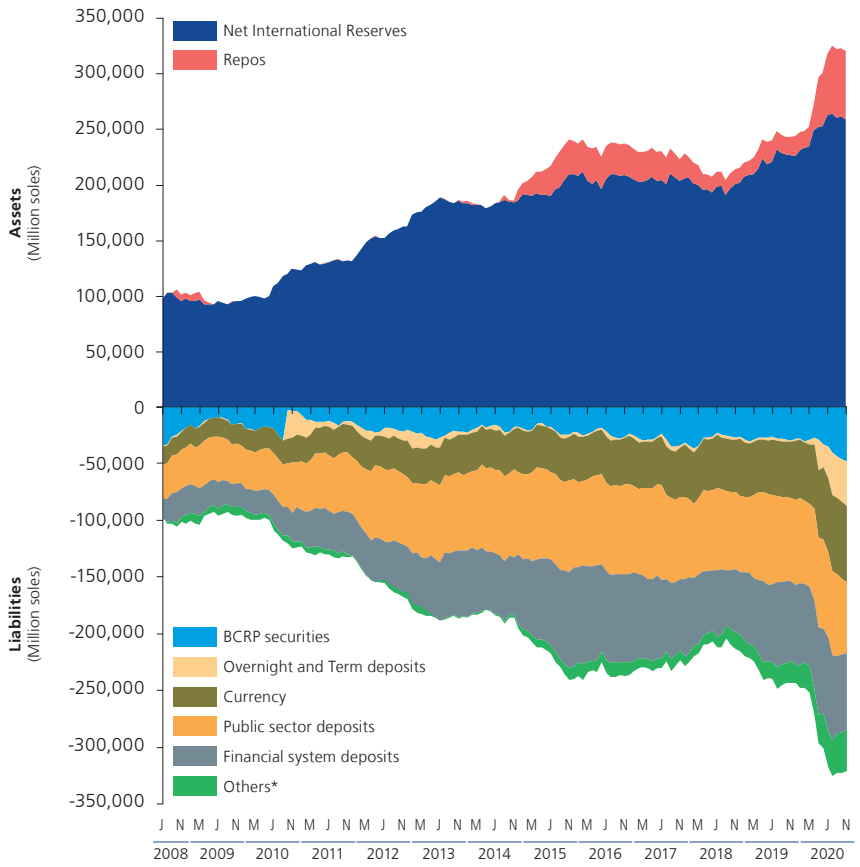
	Dec.19	Aug.20	30 Nov.20
I. Net assets	**100%**	**100%**	**100%**
Net International Reserves	**92.9%**	**81.3%**	**80.8%**
	(US$ 68,315 mills.)	*(US$ 74,662 mills.)*	*(US$ 71,728 mills.)*
Repos	**7.1%**	**18.7%**	**19.2%**
II. Net liabilities	**100%**	**100%**	**100%**
1. Total public sector deposits	**30.5%**	**23.0%**	**19.6%**
In domestic currency	18.8%	20.3%	17.7%
In foreign currency	11.7%	2.7%	1.9%
2. Total financial system deposits	**29.1%**	**22.8%**	**20.8%**
In domestic currency	5.1%	3.8%	3.9%
In foreign currency	24.0%	19.0%	16.9%
3. BCRP instruments	**12.5%**	**24.0%**	**27.3%**
CD BCRP	11.6%	11.7%	12.9%
CDR BCRP	0.0%	0.9%	2.3%
Term deposits	0.0%	8.6%	9.9%
Overnight deposits	0.9%	2.8%	2.2%
4. Currency	**21.4%**	**20.5%**	**21.0%**
5. Others*	**6.5%**	**9.8%**	**11.3%**

* Includes assets and other accounts.

The result of these operations is reflected in the change observed in the size and composition of the BCRP's balance sheet. Thus, as of November 2020, the BCRP assets amounted to S/ 320.48 billion, a sum equivalent to 45.1 percent of GDP and higher than that observed in 2015 during the de-dollarization program (39.3 percent of GDP). The increased liquidity injection carried out in recent months is reflected in the growing contribution of repo operations to the BCRP assets.

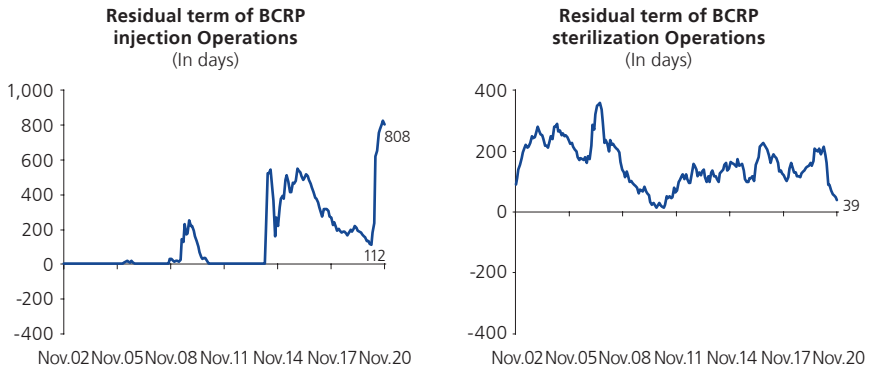
Graph 76

EVOLUTION OF THE BCRP BALANCE SHEET: 2008 - 2020



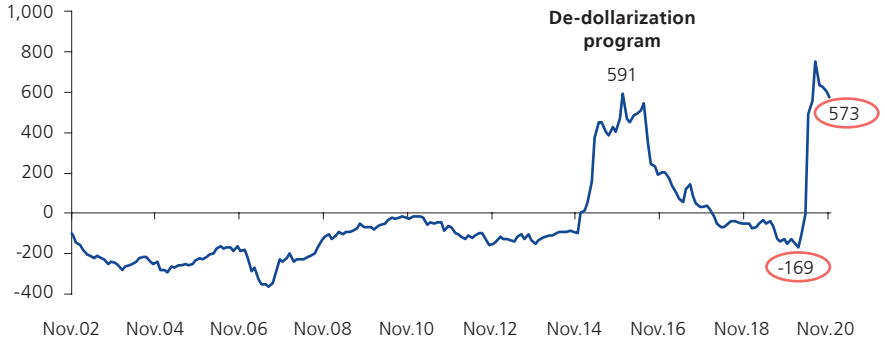
The higher term injection is reflected in the increase in the residual term of these operations, from 112 days in February to 808 days in November. Along the same lines, with the aim of increasing liquidity in the financial system, BCRP has been carrying out sterilization operations at shorter terms. Thus, the residual term of sterilization operations has decreased from 214 days in February to 39 days in November.

Graph 77



The net residual term of BCRP operations[17] captures the expansionary stance of BCRP in the yield curve. When liquidity is injected at longer terms and is sterilized at short-terms, the flattening of the yield curve is boosted and the net residual term increases. Thus, a high net residual term denotes greater liquidity in the financial system since there are liquid assets close to maturity (CD BCRP) and there is the obligation of repurchasing the repo assets in the long term. As of November, the net residual term of the BCRP operations is 573 days.

Graph 78
NET WEIGHTED RESIDUAL TERM OF BCRP OPERATIONS
(In days)



79. As for the availability of liquidity in foreign currency, on December 12 the BCRP carried out a security repo in exchange for foreign currency (US$ 120 million)

17 The net residual term is the difference between the residual term of injection and sterilization operations, weighted by the balance of each instrument. It is calculated according to the following formula: $Plazo\ Residual\ Neto = \frac{Saldo\ Inyección}{Saldo\ Esterilización} * PR\ Inyección - PR\ Esterilización$ where RT refers to the residual terms of the injection and sterilization operations, respectively.

(Circular 050-2013-BCRP). This instrument allows financial entities requiring liquidity in dollars to obtain such funds through a repos of BCRP securities in domestic currency. A characteristic of this instrument worth pointing out is that it allows providing financial institutions with liquidity in foreign currency without affecting liquidity in domestic currency.

It is also worth mentioning that the interbank interest rate in dollars was affected by transitory upward pressures in December 7 - 10 and that it rose from 0.26 percent on December 4 to 0.47 percent on December 10, but returned thereafter to 0.26 percent on December 11.

Financial Markets

80. In October and mid-November, local financial assets showed a negative performance and greater volatility than in the third quarter due to the local political crisis, the approval of fund withdrawals from the AFPs, and greater risk aversion in the international markets. This situation reversed as of the third week of November, however, when the most affected markets were the foreign exchange market and the market of government bonds. In this context, BCRP took action through liquidity injection and interventions in the foreign exchange market to stabilize the markets in this period of social and political turbulence. As a result, today the portfolios managed by institutional investors have registered a recovery and the share values of pension funds have reversed the losses caused by the health crisis, in line with the recovery of asset prices in global markets.

Interest Rates

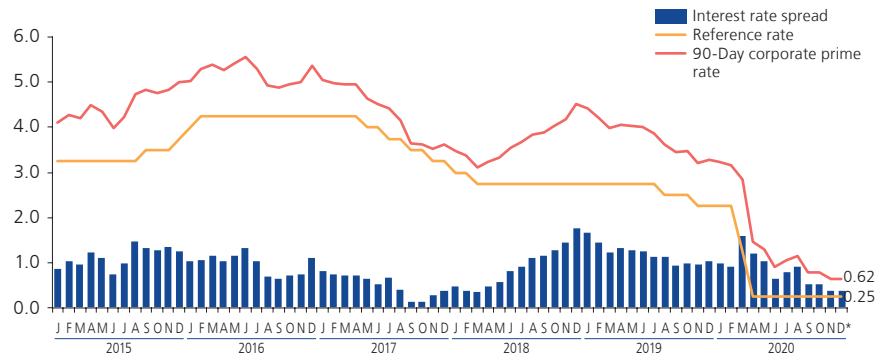
81. BCRP has continued to inject liquidity into the financial system, which is reflected in lending and borrowing interest rates that in some cases have registered historical lows in the fourth quarter. For example, the prime lending and borrowing interest rates on overnight to twelve month-operations decreased by 21 and 2 basis points on average, respectively, between September and December, and register new historical minimum levels not observed since September 2010. Similarly, in November, the corporate prime rate –for the credit segment with lower risk– showed a significantly lower rate in the fourth quarter and even reached a new historical minimum level in October (1.8 percent), while lower interest rates on long-term sovereign bonds have been transferred to the mortgage sector. On the other hand, higher interest rates are seen in the segments of small and micro businesses, which is associated with the completion of the second phase of the Reactiva Peru program and the increase in delinquency rates.

Table 40
INTERES RATE IN DOMESTIC CURRENCY
(%)

		Dec.18	Dec.19	Mar.20	Apr.20	May.20	Jun.20	Sep.20	Oct.20	Nov.20	Dec.20*
Pasive	Deposits up to 30-day	3.1	2.3	2.0	1.3	0.2	0.1	0.1	0.0	0.0	0.0
	On 31 to 180-day term deposits	4.0	2.8	2.6	2.4	1.5	0.9	0.3	0.3	0.3	0.3
	On 181 to 360-day term deposits	4.2	3.3	3.0	3.0	2.4	1.8	1.1	0.8	0.7	0.7
Active	90-day corporate prime	4.5	3.3	2.8	1.5	1.3	0.9	0.8	0.8	0.6	0.6
	Corporates	4.9	3.8	3.6	4.0	2.9	3.0	2.5	1.8	2.0	2.4
	Large companies	6.4	6.0	5.9	5.6	2.0	2.6	4.1	4.9	4.5	4.6
	Medium-sized enterprises	9.8	9.3	8.9	8.1	2.4	3.9	4.2	5.2	5.4	5.8
	Small business	18.5	18.0	18.1	18.2	2.0	4.3	6.2	8.6	13.4	15.7
	Micro business	32.7	31.3	32.6	33.1	3.2	3.8	10.7	20.8	26.7	29.5
	Consumer	44.9	40.9	39.3	41.4	40.4	38.6	38.3	37.5	36.9	38.3
	Mortgage	7.6	7.0	6.7	6.8	6.9	6.8	6.7	6.5	6.5	6.4

Memo: Annual rates for operations in the last 30 working days.
* As of December 16.
Source: BCRP and SBS.

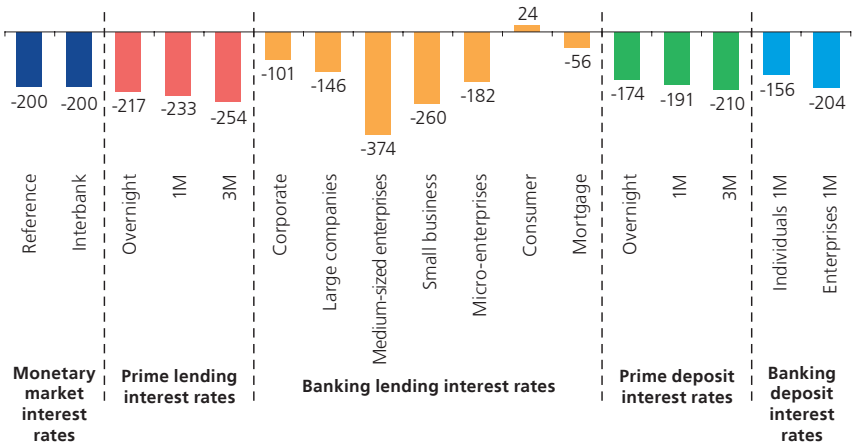
Graph 79
INTERES RATE IN S/: 90-DAY CORPORATE PRIME AND REFERENCE RATE
(%)



* As of December 16.
Source: BCRP and SBS.

In this context, liquidity injection operations in domestic currency for up to 3 years, reserve requirements reduction measures, the reduction of the benchmark interest rate, government-backed portfolio repos, and rescheduling repo operations have not only boosted credit to the private sector, but also accelerated the pass-through of the reduction in the benchmark interest rate to the rest of rates in the financial system.

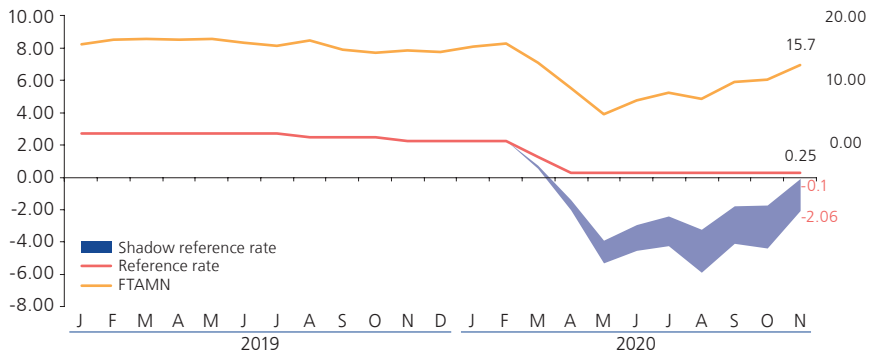
Graph 80
CHANGE OF INTEREST RATES IN SOLES: FEB. TO DEC. 2020
(Basis points)



* As of December 16.
Source: BCRP and SBS.

82. The average interest rate on lending operations in domestic currency carried out in the last 30 days (FTAMN) registered 15.7 percent in November (after having recorded its minimum low of 6.0 percent in May). This reduction in the FTAMN reflects the effect of the set of monetary easing measures implemented by BCRP, which includes the reduction of the politicy interest rate and liquidity injection measures.

Graph 81
FTAMN, REFERENCE RATE AND SHADOW REFERENCE RATE
(Percentage points)

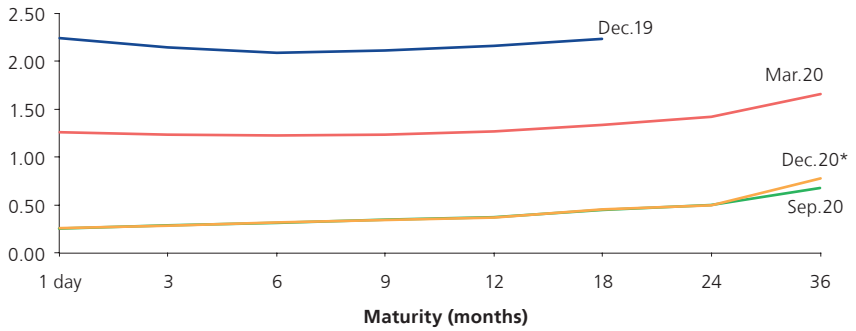


According to preliminary estimates, this reduction observed in the FTAMN is consistent with a reduction in the "shadow" reference interest rate to negative levels in the range of [-2.1; -0.1] in the month of November. The "shadow"

reference interest rate is defined as the equivalent of the policy interest rate –without restricting that it may have negative values– that generates the same monetary stimulus taking into account all its modalities, including quantitative non-conventional monetary policy measures.

83. The yield curve of BCRP securities shows a greater steepening at the 3-year term in December 2020, in line with economic agents' expectations regarding the future path of interest rates. Thus, the interest rates on bonds with terms between 6 and 24 months have not changed between September and December 2020, while the interest rates on 36-month bonds have increased from 0.68 to 0.78 percent.

Graph 82
YIELD CURVE OF CENTRAL BANK SECURITIES 1/
(%)

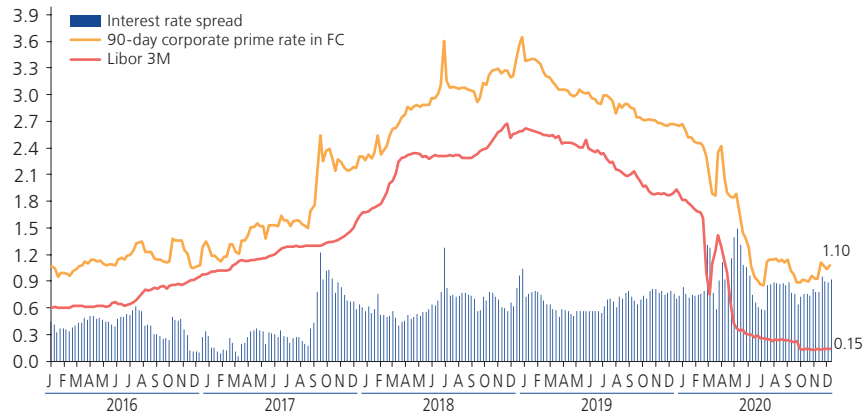


1/ Yield rate in the primary and secondary market.
* As of December 16.
Source: BCRP.

84. Interest rates in dollars in the money market have shown an upward trend in recent months. Thus, between September and December 2020, the interbank rate in foreign currency has risen from 0.16 to 0.29 percent, in line with banks' lower liquidity in dollars associated with higher transfers abroad since August 2020..

85. The prime lending rates charged by banks to their main clients increased by an average of 18 basis points in terms between 1 and 6 months, while the prime deposit interest rates increased as well but less. The spread between the prime lending rate and the Libor rate increased from 66 basis points in September to 94 basis points in December, below the maximum level observed in the year (151 basis points in May 2020). On the other hand, the spread between the deposit interest rate and the 3-month Libor rate has risen from -8 to 4 basis points in the fourth quarter, showing a stable conduct.

Graph 83
INTEREST RATE IN US$: 90-DAY CORPORATE PRIME AND LIBOR 3-MONTH
(%)



* As of December 16.
Source: BCRP.

Similarly, the interest rates paid on time deposits increased by an average of 1 basis point between September and December 2020. In the credit market, interest rates showed a reduction in most cases and a substantial reduction was also observed in the interest rate on loans in dollars (down by 10 percent year-on-year in October 2020).

Table 41
INTEREST RATE IN FOREIGN CURRENCY
(%)

		Dec.18	Dec.19	Mar.20	Apr.20	May.20	Jun.20	Sep.20	Oct.20	Nov.20	Dec.20*
Pasive	Deposits up to 30-day	1.9	1.5	1.0	0.6	0.2	0.1	0.0	0.0	0.1	0.1
	On 31 to 180-day term deposits	2.0	1.3	1.1	1.2	0.9	0.5	0.2	0.2	0.2	0.2
	On 181 to 360-day term deposits	1.9	1.4	1.0	1.2	1.2	0.8	0.4	0.4	0.4	0.3
Active	90-day corporate prime	3.6	2.7	1.9	1.9	1.5	1.0	0.9	0.9	1.1	1.1
	Corporates	4.0	3.2	2.7	3.1	3.1	2.8	2.3	1.9	2.0	2.0
	Large companies	5.5	5.5	4.8	4.7	5.3	5.2	4.7	4.7	4.5	4.5
	Medium-sized enterprises	6.9	6.6	6.7	6.6	6.6	6.3	6.7	6.5	6.4	6.3
	Small business	9.9	8.8	7.7	8.3	6.0	4.8	6.1	5.9	5.6	4.3
	Micro business	7.1	11.0	12.3	9.8	16.8	15.6	6.9	6.4	6.7	9.4
	Consumer	36.1	36.1	36.1	37.3	37.1	36.6	34.4	35.1	35.2	35.4
	Mortgage	6.1	5.6	5.9	5.6	5.5	6.0	5.9	5.6	5.4	5.4

Memo: Annual rates for operations in the last 30 working days.
* As of December 16.
Source: BCRP and SBS.

Fixed-Income Market

86. Peruvian companies' financing instruments in local and foreign markets showed less dynamism in the fourth quarter, although the outlook for future financing is

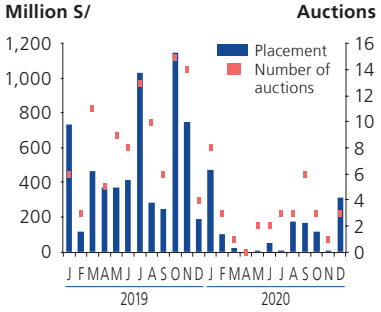
positive due to the stabilization of international financial conditions (low interest rates worldwide), the reduction in risk spread of our assets, and the higher prices of metals, amid a context of abundant liquidity.

Security placements in the local capital market show lower growth. Between September and December 2020, the placements of private companies by public offering amounted to S/ 430 million (S/ 352 million in the third quarter), of which S/ 426 million are securities in domestic currency. On the other hand, in the secondary market, the trading of debt instrument at the Lima Stock Exchange (LSE) increased by 100 percent in the third quarter compared to the second quarter. Moreover, the participation of non-resident investors in local securities in dollars remained unchanged in this period.

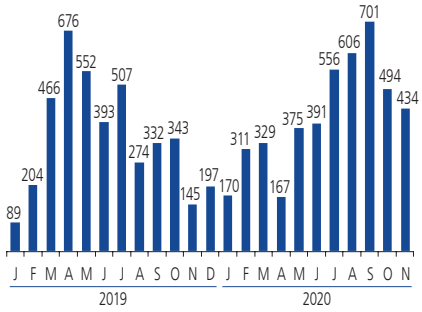
Graph 84

FIXED INCOME MARKET OF THE PRIVATE SECTOR

Placement of Private Sector Bonds
(Amount and Number of Auctions)



Debt Instruments Trading
(Million S/)



Source: SMV.

On the other hand, although greater dynamism has been observed in 2020 in the debt issued by Peruvian companies in the foreign market, it decreased in the fourth quarter. Eight Peruvian companies (three banks) placed debt instruments amounting to S/ 3.26 billion at terms between 2 and 14 years, but in the fourth quarter there was only one placement by Auna for a total of US$ 300 million with a 5-year maturity term. It is worth pointing out that the monthly average placed so far in 2020 (US$ 284 million) is the highest since 2017, and that, in the case of public companies, Cofide placed a 7-year bond (US$ 500 million) in September for buy back part of its bonds maturing in 2022 and 2025.

In addition, international placements in soles by non-resident entities have also been observed in 2020, including 28 issuances amounting to a total of S/ 1.74 billion with maturity terms between 3 months and 7 years. The amount placed in

2020 is the historical maximum level, which has been encouraged by factors such as the low cost of coverage, investors' demand for securities in soles that offer higher coupons than other emerging countries, confidence in the soundness of the PEN, and expectations of a prompt recovery of the Peruvian economy.

Institutional investors also show a recovery in the value of the portfolios they manage after the fall registered in March 2020 due to the beginning of lockdown and confinement.

On the one hand, even though the value of the AFP portfolio decreased by 10.8 percent, from S/ 172.61 billion to S/ 154 billion between February and March 2020, it has been recovering in recent months and currently amounts to S/ 164.71 billion. The reduction in the value of the AFP portfolio is associated with the devaluation of the assets, but also with the withdrawal of funds requested by affiliates and approved by Emergency Decrees 034-2020 and 038-2020 and Law 31017, which amounted to S/ 24.26 billion. A total of 6.8 million affiliates (of the 7.6 million affiliates) made withdrawals since April 9. Because of this, the AFPs generated liquidity between April and July 2020 to make payments to members by liquidating their investments abroad, as well as their local investments (mainly sovereign bonds) and made repo operations with the BCRP, carried out direct sales of dollars to the BCRP, and reduced their deposits in the local financial system. It should be pointed out that the facilities granted by BCRP allowed the settlement of securities to be limited as well as to reduce the impact on the price of assets.

On the other hand, in line with volatility in global financial markets and uncertainty about the effects of the pandemic, a reduction in the number of participants and in the assets under management has been observed in the case of local mutual funds since February 2020. Thus, equity decreased from S/ 37.69 to S/ 34.74 billion between February and March 2020. The trend in this episode in terms of the drop in equity and participants is very similar to that observed in September 2008 due to the great international financial crisis, but the recovery this time has been faster. As of November 2020, the equity managed by mutual funds amounts to S/ 45.10 billion.

Insurance companies have also seen an increase in the value of their portfolio due to the reactivation of economic activities. As of September 2020, the managed portfolio was S/ 47.54 billion, while in February and March it amounted to S/ 45.19 and S/ 44.86 billion, respectively.

Foreign Exchange Market

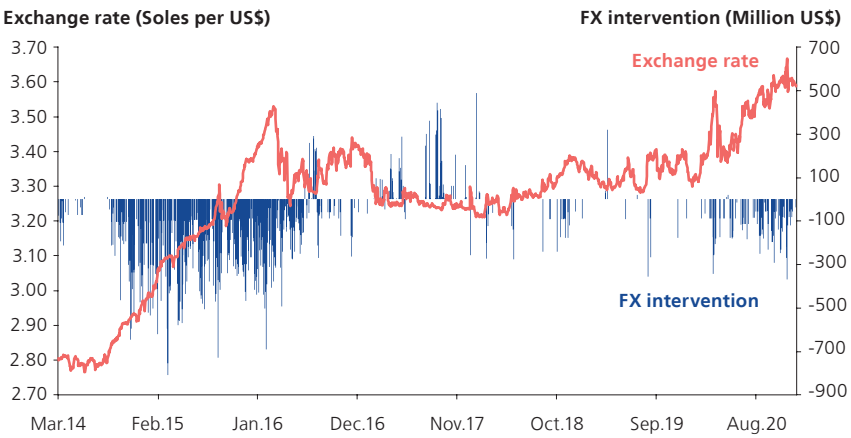
87. Most of the currencies in the region showed a positive performance in the fourth quarter, favored by the recovery in the price of commodities and the progress made in testing of COVID-19 vaccines. Despite this, however, volatility in foreign exchange markets is still high given the uncertainty associated with

the duration of the global recession and the resurgence of COVID-19 observed worldwide.

In the months of October and November, the PEN was affected by greater volatility associated with the episode of the presidential vacancy, which led the exchange rate to reach a historical record level (S/ 3.667 per dollar). Thus, the PEN depreciated by 1.9 percent between the end of September and mid-November 2020, from S/ 3.600 to S/ 3.667 per dollar, after which it appreciated by 2.1 percent and reached S/ 3.589 per dollar at the beginning of December. So far this year, the PEN has accumulated a depreciation of 8.3 percent.

Graph 85

EXCHANGE RATE AND FX INTERVENTION 1/



1/ Includes Net purchases of US$ in the spot market and placement of CDLD BCRP, CDR BCRP, and FX swaps.
As of December 16.

In a context of greater domestic uncertainty, BCRP intervened in the foreign exchange market through auctions of FX swaps-sell, placements of Indexed Certificates of Deposit (CDRBCRP), and sales of dollars with the aim of minimizing volatility in the price of the PEN in order to thereby preserve the stability of the financial system and ensure the proper functioning of the markets. Thus, between September and December, BCRP placed 2-month and 6-month FX swaps-sell for a total of S/ 9.07 billion and instruments amounting to S/ 4.91 billion matured. As a result, the balance of FX swaps-sell as of December 16 was S/ 7.55 billion. In the case of CDR-BCRP, S/ 8.11 billion was placed in terms between 2 and 3 months and a total of S/ 4.23 billion matured, bringing the balance of this instrument to S/ 6.69 billion as of December 16. The accumulated balance of sale exchange swaps and CDR BCRP amounted to S/ 14.2 million (2.5 percent of GDP), less than the balance observed in the first quarter of 2016 (S/ 39.8 billion, equivalent to 6.4 percent of GDP). Additionally, BCRP intervened in the foreign exchange market selling US$ 22 million in the spot market.

Table 42
NUMBER OF DAYS OF INTERVENTION

	Trading days	Number of intervention days						SD of the Exchange rate (Annual % change)
		Spot market	Placement of derivatives and indexed instruments	Total (spot and/or placement)	% of days with intervention			
					Spot	Instruments	Total	
2016	250	50	119	134	20%	48%	54%	7.3%
2017	249	55	26	64	22%	10%	26%	4.5%
2018	245	4	27	30	2%	11%	12%	3.4%
2019	249	4	6	10	2%	2%	4%	4.4%
2020*	244	7	88	90	3%	36%	37%	7.5%

* As of December 16.

88. Episodes of high volatitility of short-duration associated with the recent political crisis events in the country affected the exchange rate in the fourth quarter of 2020.

i. The first motion of impeachment against the President of the Republic was discussed in the Congress of Peru in December 2017. The US dollar-PEN exchange rate rose from S/ 3.244 to S/ 3.299 per dollar and subsequently decreased to S/ 3.236 per dollar after the motion to start impeachment proceeding was not approved. Between December 13 and 22, the annualized volatility of the sol was 13.1 percent, well above the volatility observed in last November, and below the regional average. At the time of these developments, BCRP placed CDR BCRP worth US$ 256 million on December 15.

ii. A second motion for presidential vacancy was initiated in March 2018. This time, the exchange rate rose from S/ 3.255 to S/ 3.271 per dollar between March 14 and March 19, but fell to S/ 3.266 per dollar on March 20 (the day before the President of the Republic resigned). Then, after the new head of the Executive swore as President, the PEN rose 0.4 percent. In this case, BCRP did not intervene in the foreign exchange market as volatility between March 14 and 22 was lower than the level observed in February 2020 and also lower than the volatility level in the rest of Latin American countries.

In addition to this, Peru experienced two episodes of high political uncertainty in 2020. The first one, which started on September 11 when Congress admitted a first vacancy process against the President of the Republic, had a reduced impact on the foreign exchange market given the intervention of BCRP, which placed CD RBCRP worth US$ 36 million and SCV amounting to US$ 196 million. The volatility of the PEN in the September 10 - 21 period was 8.6 percent, below the average level in the region (12.7 percent), but above the level observed in August 2020 (4.8 percent).

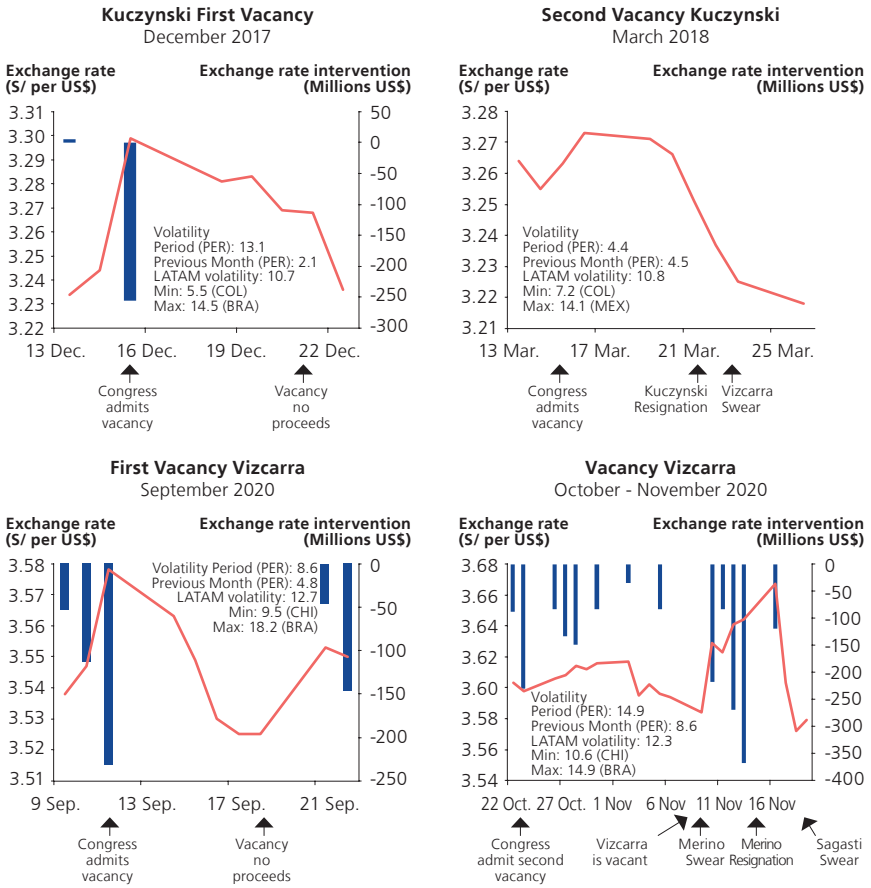
A second vacancy motion whereby President Martín Vizcarra was dismissed from the presidency was approved on November 9. The exchange rate rose from S/ 3.584

per dollar on November 9 to S/ 3.629 per dollar on November 10 –the highest daily depreciation registered since April 1, 2020– and a new historical maximum level was reached on November 16 (S/ 3.667 per dollar) after the resignation of President Manuel Merino. After the election of Francisco Sagasti as the new President of the Republic, the PEN appreciated 1.75 percent on November 17 (the highest appreciation observed since March 27, 2020). The volatility in this period (November 9 to November) was 14.7 percent, above the regional average (12.7 percent). The intervention of BCRP in this period through placements of CDR BCRP (US$ 299 million) and SCV (US$ 759 million) amounted to US$ 1.06 billion.

A net demand of US$ 592 million was recorded in the foreign exchange flows between November 9 and 18, associated mainly with the operations of non-resident investors in the spot market and the derivatives market (US$ 489 million). The supply was provided by the non-financial system and BCRP.

Graph 86

EXCHANGE RATE VOLATILITY IN RECENT PERIODS OF POLITICAL CRISIS

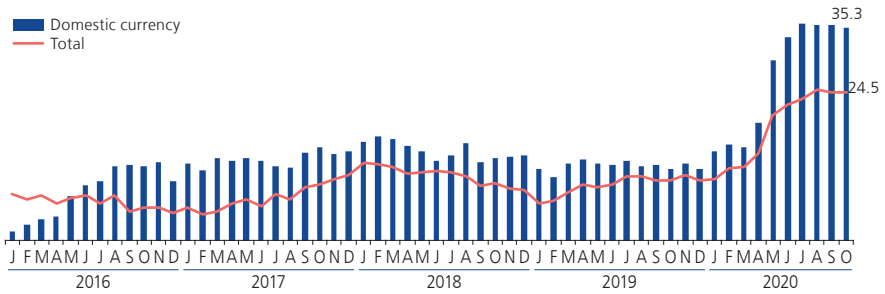


1/ Includes: purchases / sales of dollars in the spot market and placements of CDLD BCRP, CDR BCRP and exchange swaps.
2/ Volatility is the annualized standard deviation of daily returns.
3/ LATAM: Brazil, Chile, Colombia and Mexico.

Liquidity

89. Private sector deposits registered a year-on-year growth rate of 24.5 percent in October 2020. By currencies, deposits in soles grew 35.3 percent year-on-year, while deposits in dollars grew 6.0 percent, reflecting people's greater preference for saving in domestic currency.

Graph 87
DEPOSITS OF THE PRIVATE SECTOR BY CURRENCY
(Annual % change)



The dollarization ratio of deposits fell from 35.8 percent in 2019 to 31.3 percent in October 2020, this fall being explained by a decrease in the dollarization ratio of both personal deposits (from 30.1 to 27.0 percent) and corporate deposits (from 45.9 to 37.9 percent).

Deposits are foreseen to continue growing at a rate higher than that of credit to the private sector in the rest of the year.

Table 43
MONETARY AND CREDIT ACCOUNTS OF THE DEPOSITORY CORPORATIONS (END-OF-PERIOD) 1/
(Annual % change)

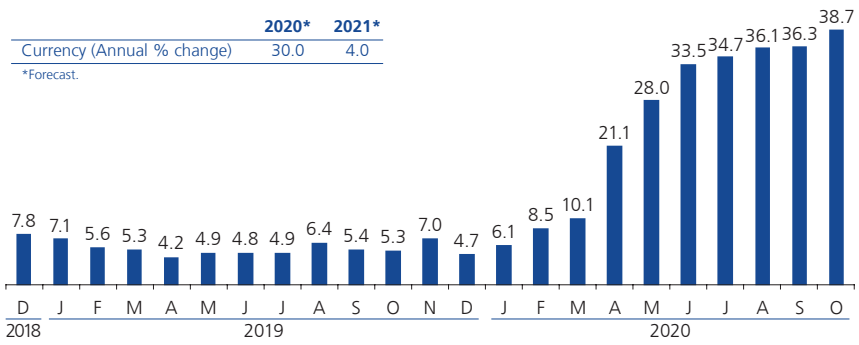
	Dec.19	Mar.20	Jun.20	Sep.20	Oct.20	Dec.20*	Mar.21*	Jun.21*	Sep.21*	Dec.21*	Dec.22*
Currency in circulation (End-of-period)	4.6	10.1	33.5	36.3	38.7	30.0	22.5	0.7	-1.7	4.0	3.0
Deposits in domestic currency	11.9	15.4	33.6	35.8	35.3	32.5	32.0	16.0	11.7	6.8	7.0
Total deposits 1/	10.0	12.2	22.5	24.6	24.5	24.0	24.2	12.7	9.2	5.2	5.3
Broad money in domestic currency	10.2	13.3	32.1	34.3	34.2	32.0	30.0	12.6	8.7	6.2	6.1
Total broad money 1/	9.4	11.5	24.1	26.0	26.1	25.0	23.9	10.7	7.4	5.0	5.0
Credit to the private sector in domestic currency	9.8	9.7	19.0	22.7	21.6	20.4	19.7	9.7	4.4	3.8	3.4
Credit to the private sector 1/	6.9	8.3	13.3	14.1	13.1	12.5	10.7	5.5	3.2	3.0	3.0

1/ Balances are valuated at constant exchange rate on December 2019.
*Forecast.

90. **Currency in circulation** would grow 30 percent in 2020 and 4 percent in 2021, the faster pace of currency growth in 2020 being explained by people's precautionary greater accumulation of banknotes and coins. This increase would correspond to the greater transactional and precautionary demand originated by the effects of the state of emergency because of the COVID-19 pandemic. Restrictions on economic activity and the implementation of monetary subsidies for low-income social sectors to cover their basic needs would have led a significant segment of the population to use cash in their transactions and also to keep it for precautionary reasons in the current context.

However, it is worth highlighting that the beginning of the economic reactivation phases has contributed to normalize the behavior of currency in circulation, which has had a more moderate increase in its annual rate since the month of June. The delivery of the Second Universal Bond is expected to have a positive impact on the growth of currency in the last quarter of 2020.

Graph 88
CURRENCY
(Annual % change)

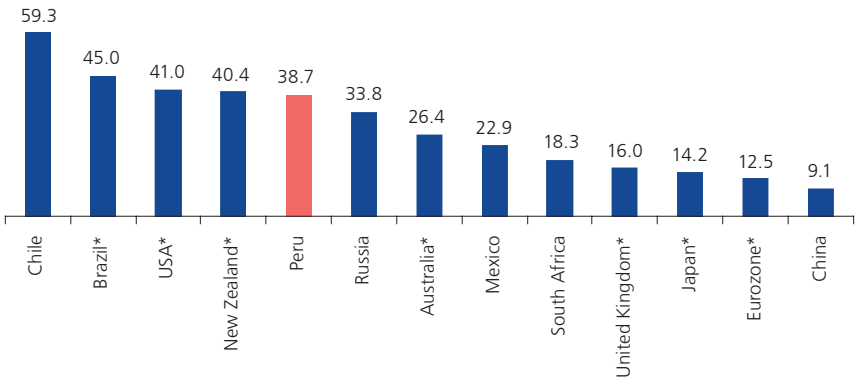


91. In Peru, the annual growth rate of currency in circulation in October 2020 was 38.7 percent, higher than the growth rate observed in March 2020 (10.1 percent),

These increases in the availability of cash do not generate inflationary pressures given that, in times of crisis, the speed of money circulation decreases due to the precautionary increase in demand for currency (in Peru, the annual growth rate of the speed of money circulation in the third quarter of 2020 was -30.2 percent, lower than the growth rate registered in the first quarter (-12.3 percent). In this

sense, despite the growing use of alternative payment methods (as a result of technological improvements), the demand for cash has been exceptionally high.

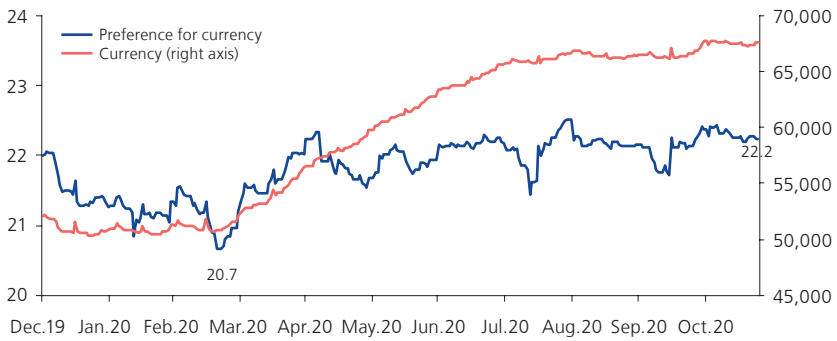
Graph 89
CURRENCY GROWTH BY COUNTRIES: OCTOBER 2020
(% change)



*As of September 2020.
Source: OECD and Central Banks.

92. At the beginning of the quarantine, the preference for currency had reached historical minimum levels (20.7 percent). Then, a sustained growth was observed until the first week of May, after which it remained slightly above 22 percent, except for short periods in the second weeks of August and October.

Graph 90
CURRENCY AND PREFERENCE FOR CURRENCY
(In millions of soles and in %)



* Preliminary.

Credit to the Private Sector

93. **Credit to the private sector** showed a faster pace of growth, accelerating from a rate of 6.9 percent in 2019 to a year-on-year rate of 13.1 percent in October, driven by the Reactiva Peru program. By segments, credit to companies grew 22.9 percent, recording a higher than the rate observed in December 2019 (4.2 percent). On the other hand, credit to individuals slowed down substantially, from 11.3 percent in 2019 to 1.9 percent in October. Moreover, all of the types of credit to individuals registered a decline (car loans, credit cards, and the rest of consumer loans decreased by 3.6, 13.6, and 0.6 percent, respectively). On the side of loans to companies, on the other hand, the segments that showed higher growth rates were loans to medium-sized companies (40.7 percent), followed by loans to small and micro-companies (35.5 percent), and by loans to corporations and large companies (10.4 percent).

    Credit in soles continues to grow at two-digit rates, driven mainly by the Reactiva Peru program. On the other hand, the growth of credit in dollars has been declining since June due to the greater preference for local funding and for interest rates in soles, which remain below their historical average levels. Thus, as of October, credit in soles has grown 21.6 percent, while credit in dollars has dropped 10.3 percent in the same period.

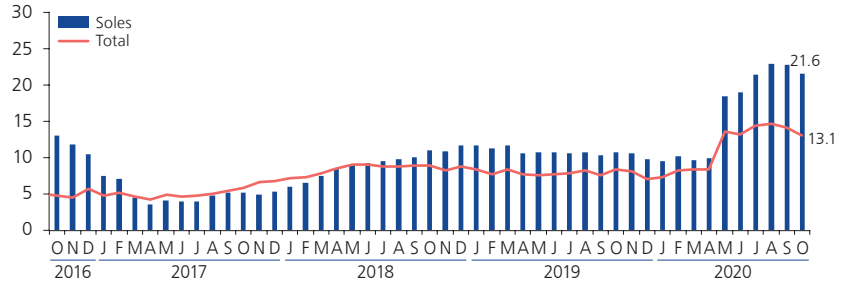
94. The measures taken by BCRP, which continue year-to-date, allow for more flexible financial conditions in different modalities and have led credit to show an anti-cyclical behavior, counterbalancing the negative effects of the pandemic on economic activity.

Table 44
CREDIT TO THE PRIVATE SECTOR 1/
(Annual growth rate)

	Dec.18	Mar.19	Jun.19	Sep.19	Dec.19	Mar.20	Jun.20	Sep.20	Oct.20
Businesses	**7.0**	**7.3**	**5.3**	**4.9**	**4.2**	**7.7**	**20.1**	**24.3**	**22.9**
Corporate and large companies	9.1	8.9	6.3	6.4	4.4	11.7	22.0	13.7	10.4
Medium-sized enterprises	3.8	3.9	1.6	0.1	0.5	0.6	21.7	40.2	40.7
Small business and Micro business	5.9	7.0	7.1	6.6	7.7	5.5	13.9	33.8	35.5
Individuals	**11.5**	**11.7**	**11.4**	**11.7**	**11.3**	**9.3**	**2.8**	**-1.3**	**-1.9**
Consumption	13.1	13.5	13.0	13.4	12.8	10.2	1.6	-4.2	-5.0
Car loans	-3.5	2.7	6.9	8.5	11.9	6.9	0.9	-3.1	-3.6
Credit cards	11.9	14.7	14.8	16.0	13.4	8.9	-4.8	-12.6	-13.6
Rest	14.7	13.4	12.3	12.3	12.6	11.0	5.0	0.1	-0.6
Mortgage	9.0	9.1	9.1	9.1	9.0	8.0	4.6	3.1	2.8
TOTAL	**8.7**	**9.0**	**7.6**	**7.5**	**6.9**	**8.3**	**13.3**	**14.1**	**13.1**

1/ Balances are valuated at constant exchange rate on December 2019.

Graph 91
TOTAL CREDIT TO THE PRIVATE SECTOR AND IN NATIONAL CURRENCY
(Annual growth rate)



95. The balance of total credit to the private sector has evolved showing a path above its long-term trend, in line with the start of the Reactiva Peru program and the easing of financial conditions to safeguard the flow of payments.

Graph 92
UNSEASONALLY CREDIT TO THE PRIVATE SECTOR AND TREND
(Billion soles)

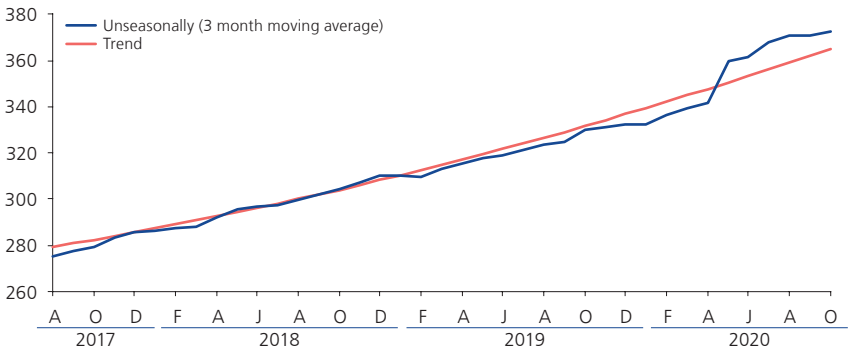


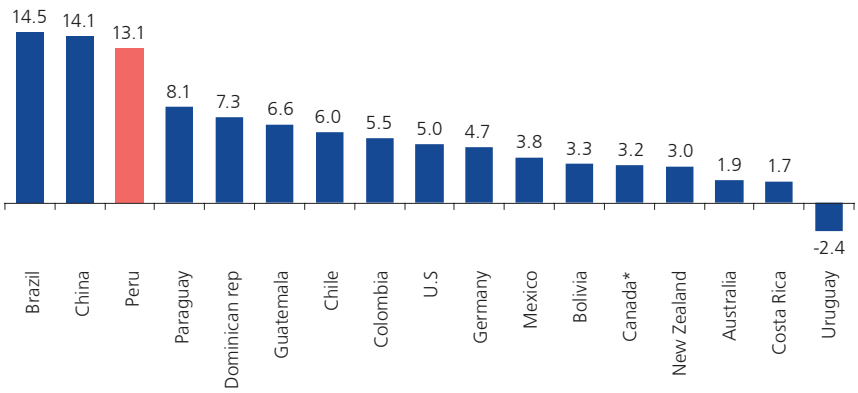
Table 45
CREDIT TO THE PRIVATE SECTOR 1/
(Annual % change)

	Dec.18	Mar.19	Jun.19	Sep.19	Dec.19	Mar.20	Jun.20	Sep.20	Oct.20
Domestic Currency	11.6	11.7	10.7	10.4	9.8	9.7	19.0	22.7	21.6
Foreign Currency	1.9	2.4	0.2	0.3	-0.4	4.6	-2.3	-9.5	-10.3
Total	**8.7**	**9.0**	**7.6**	**7.5**	**6.9**	**8.3**	**13.3**	**14.1**	**13.1**

1/ Balances are valuated at constant exchange rate on December 2019.

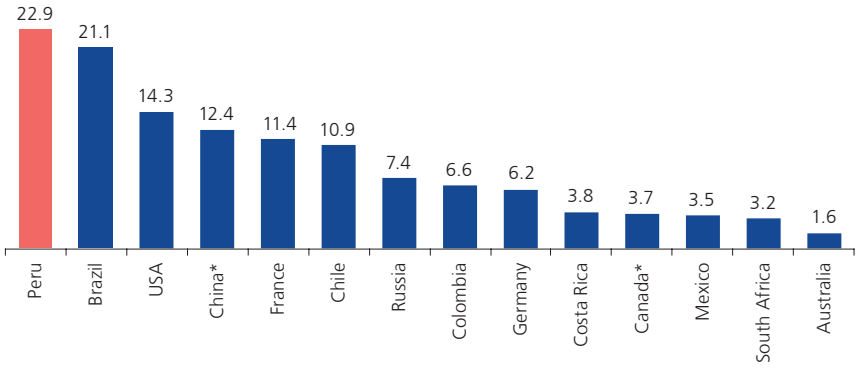
96. Credit to the private sector has responded to the monetary stimulus measures adopted by central banks worldwide. In October 2020, Peru shows annual growth rates of total credit to the private sector and to companies (13.1 percent and 22.9 percent, respectively) that are among the higher rates observed today.

Graph 93
ANNUAL GROWTH OF CREDIT TO THE PRIVATE SECTOR: OCTOBER 2020
(% change)



* As of September 2020.
Source: Central banks.

Graph 94
ANNUAL GROWTH OF CREDIT TO PRIVATE COMPANIES: OCTOBER 2020
(% change)



* As of September 2020.
Source: Central banks.

97. Moreover, the BCRP survey on credit conditions shows that supply conditions remain restrictive compared to last quarter's conditions, although improvements are observed in credit for corporations, and large and medium-sized companies.

On the other hand, an improvement is observed in all three types of credit In the case of loans to individuals.

98. On the other hand, the perception of the demand for loans in the case of companies remains restrictive for all segments. A deterioration is observed in the case of corporations and large companies, whereas, on the contrary, an improvement is observed in the case of medium-sized and small and micro companies. In the case of credit to individuals, there is a recovery in demand prospects after the drastic fall observed in the past quarter. The case of mortgage loans stands out as they had reached their historical minimum level during the second quarter of 2020, but in this quarter not only do they show the greatest recovery, but also an improvement in demand conditions.

Table 46
RESULTS OF THE SURVEY OF CREDIT CONDITIONS 2019-2020
(Current situation indicators)

	Q2.19	Q3.19	Q4.19	Q2.20	Q3.20	Average Q4.11 - Q2.20
Large companies						
Offer (banks)	40.6	50.0	50.0	29.2	41.7 ⇧	46.0
Demand (customers)	41.7	41.7	45.8	55.0	35.7 ⇩	53.5
Medium-sized enterprises						
Offer (banks)	53.1	50.0	53.6	35.7	44.4 ⇧	46.6
Demand (customers)	66.7	50.0	62.5	37.5	42.9 ⇧	55.4
Small businesses and Microbusinesses						
Offer (banks)	53.6	45.0	54.2	46.4	32.1 ⇩	45.8
Demand (customers)	65.0	54.2	54.2	37.5	41.7 ⇧	52.4
Consumer						
Offer (banks)	50.0	54.2	50.0	39.3	43.8 ⇧	47.7
Demand (customers)	60.7	70.8	62.5	16.7	42.9 ⇧	56.2
Mortgage						
Offer (banks)	39.3	50.0	50.0	42.9	46.9 ⇧	48.4
Demand (customers)	50.0	61.9	58.3	8.3	53.6 ⇧	54.6
Credit cards						
Offer (banks)	42.9	50.0	50.0	33.3	36.1 ⇧	46.7
Demand (customers)	53.6	62.5	62.5	25.0	31.3 ⇧	55.8

Own elaboration.
[1] The survey includes commercial banks.
[2] The index of evolution of the credit supply conditions is constructed from the difference between the percentage of entities that have credit approval criteria "relaxed" minus the percentage of companies that have "restricted" it. This index fluctuates between 0 and 100; of in this way, values greater than 50 indicate a "relaxation" of credit conditions, while values below 50 indicate a tightening of credit conditions. Likewise, an index value equal to 50 reflects a neutral position, without changes in conditions.

Dollarization of Credit and Liquidity

99. The ratio of dollarization of credit measured at a constant exchange rate was 21.0 percent in October, lower than in December 2019 (25.9 percent). This

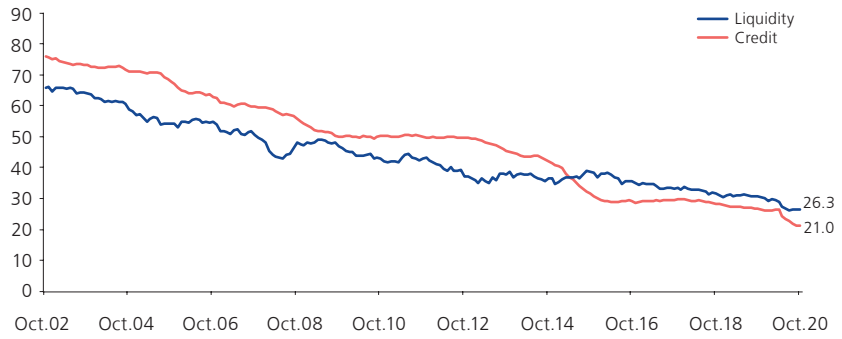
reduction results mainly from a lower dollarization of credit to companies, which decreased from 37.3 to 27.8 percent in this period, while the dollarization of credit to individuals continued to show its downward trend. The dollarization ratio in the segment of mortgage loans went from 13.3 percent to 12.0 percent in October, while the dollarization ratio of consumer loans decreased from 6.0 percent to 5.4 percent in the same period.

Table 47
RATIO OF DOLLARIZATION OF CREDIT 1/
(%)

	Dec.18	Mar.19	Jun.19	Sep.19	Dec.19	Mar.20	Jun.20	Sep.20	Oct.20
Businesses	**38.7**	**38.2**	**38.4**	**38.1**	**37.3**	**37.8**	**31.7**	**27.9**	**27.8**
Corporate and large companies	51.9	51.2	51.8	51.3	50.5	50.4	43.2	41.8	42.0
Medium-sized enterprises	40.1	39.9	39.7	39.4	38.5	38.7	30.0	24.4	24.2
Small business and Micro business	6.2	5.9	5.7	5.7	5.7	5.6	4.9	3.8	3.8
Individuals	**10.4**	**10.0**	**9.7**	**9.4**	**8.9**	**8.5**	**8.3**	**8.2**	**8.1**
Consumer	6.4	6.2	6.2	6.2	6.0	5.7	5.5	5.4	5.4
Car loans	13.9	13.4	14.2	14.8	14.8	14.9	14.9	16.0	16.0
Credit cards	7.1	7.2	7.4	7.4	7.1	6.6	5.6	5.3	5.3
Rest	5.6	5.4	5.3	5.1	5.0	4.9	5.0	5.0	4.9
Mortgage	16.3	15.5	14.9	14.2	13.3	12.7	12.5	12.1	12.0
TOTAL	**27.8**	**27.2**	**27.1**	**26.7**	**25.9**	**26.3**	**23.4**	**21.2**	**21.0**

1/ Balances are valuated at constant exchange rate on December 2019.

Graph 95
RATIO OF DOLLARIZATION OF CREDIT AND LIQUIDITY: 2002 - 2020
(%)



Non-Performing Loans

100. The NPL ratio was 3.85 percent in October, 0.57 percentage points higher than in December 2019, this result being explained mainly by the higher delinquency of loans to natural persons, especially in credit associated with credit cards. On

the other hand, the increase in non-performing loans to companies was more moderate, which would be reflecting the grace periods included in the loan repayment rescheduling and government-backed credit programs. It is worth mentioning that these credit programs have contributed to the expansion of existing loans, which also helps to moderate the increase in the NPL ratio.

Table 48
NON-PERFORMING LOANS INDEX
(%)

	Dec.,18	Mar.19	Jun.19	Sep.19	Dec.19	Mar.20	Jun.20	Sep.20	Oct.20
Businesses	**3.59**	**3.66**	**3.68**	**3.70**	**3.57**	**3.68**	**3.57**	**3.60**	**3.71**
Corporate and large companies	0.58	0.61	0.64	0.57	0.62	0.63	0.66	0.84	0.96
Medium-sized enterprises	7.84	8.10	8.25	8.67	8.24	9.00	7.53	6.81	6.76
Small business and Micro business	7.60	7.52	7.57	7.52	7.13	7.41	6.97	6.07	6.17
Individuals	**3.18**	**3.10**	**3.24**	**3.17**	**3.15**	**3.33**	**3.77**	**4.08**	**4.47**
Consumer	3.32	3.19	3.37	3.28	3.27	3.47	3.91	4.58	5.23
Credit cards	5.32	5.27	5.52	5.49	5.47	5.79	6.21	8.24	9.57
Car loans	4.45	3.92	3.97	3.97	3.75	3.86	4.78	5.58	5.71
Rest	1.54	1.56	1.59	1.66	1.68	1.83	2.55	2.52	2.88
Mortgage	3.01	2.98	3.07	3.02	2.98	3.15	3.59	3.47	3.53
Average	**3.44**	**3.46**	**3.52**	**3.50**	**3.28**	**3.41**	**3.52**	**3.66**	**3.85**

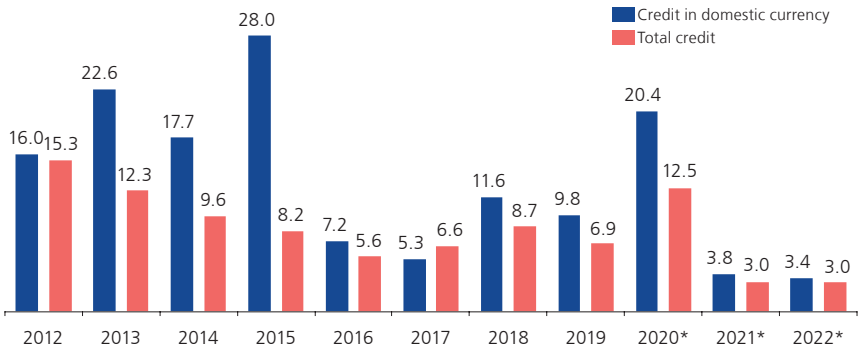
101. On the other hand, it is also important to point out that the financial system has been taking measures to mitigate the impact of the pandemic on the financial system's solvency, including strengthening the equity base, improving the control of operating and financial expenses, and establishing voluntary provisions.

Projection of Credit to the Private Sector

102. In the forecast horizon (2020-2022), credit to the private sector is expected to grow at higher rates than the nominal output, with which the ratio of credit to the private sector-to-GDP would increase from 43 in 2019 to 46 percent in 2022. This projection also assumes the recovery of economic activity to pre-pandemic levels in 2022.

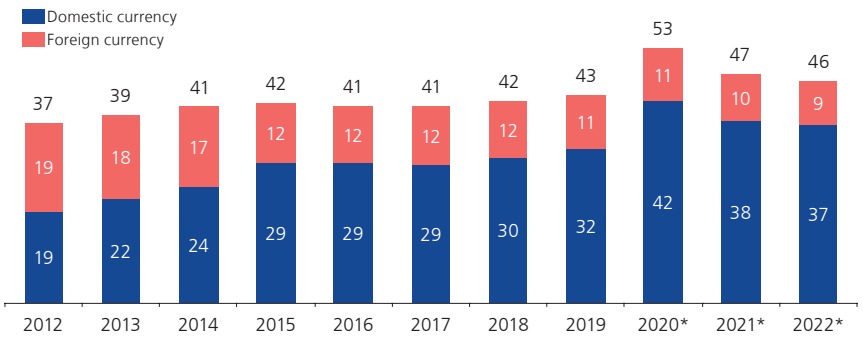
Credit to the private sector in domestic currency is projected to grow 20.4 percent in 2020, 3.8 percent in 2021, and 3.4 percent in 2022, taking into account the statistical effect of the strong increase in 2020 and the beginning of the amortization of loans granted under the Reactiva Perú program. Thus, total credit would grow 12.5 percent in 2020, 3.0 percent in 2021, and 3.0 percent in 2022. As a result, the dollarization ratio of credit would continue to decrease, reaching a level of 20 percent at the end of 2022.

Graph 96
CREDIT TO THE PRIVATE SECTOR
(% change)



* Forecast.

Graph 97
RATIO CREDIT/GDP
(%)



* Forecast.

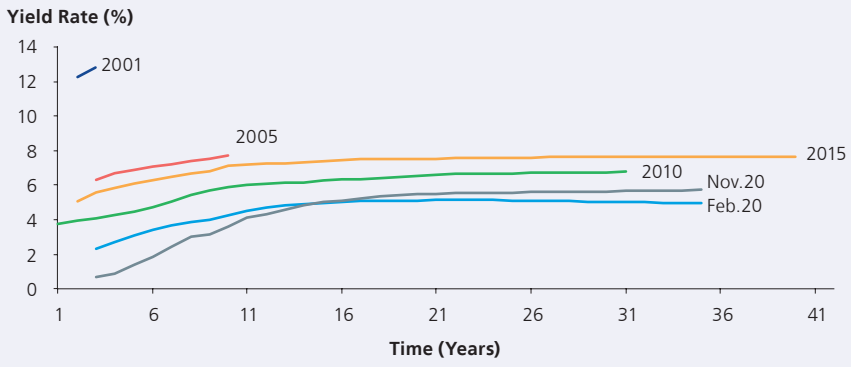
Box 6

RECENT DEVELOPMENTS IN THE SOVEREIGN BOND MARKET, MAIN PARTICIPANTS AND CHANGES IN STRUCTURE OVER TIME

This box describes the evolution of the sovereign bond market and its participants in recent years. Sovereign bonds are Peruvian debt securities issued in soles (nominal) or indexed to inflation (VAC). The market in which these securities are traded has grown significantly since 2003, after the implementation of the market makers program by the Ministry of Economy and Finance (MEF). Thus, for example, the balance of Public Treasury Bonds (BTP) has increased from a level of S/ 6.50 billion in 2003 to S/ 122.95 billion as of October 2020. This greater development of the BTP market, observed mainly since 2013, has been in line with foreign investors' capital flows to the Peruvian bond market to take advantage of investment opportunities. The main participants in the BTP market are non-resident investors, Pension Fund Administrators (AFP), and banks.

The development of the BTP market has allowed the creation of a risk-free yield curve with increasingly long maturity terms. The lengthening of the yield curve began in 2005 with the placement of bonds with up to 15 year maturity terms and with placements of 20-year BTPs since 2007. In 2020, the interest rates on short-term BTPs decreased, while the interest rates on long-term BTPs increased, which has resulted in a recent steepening of the yield curve.

BTP YIELD CURVE
(%)



Source: MEF.

Moreover, 32-year bonds were placed in 2010 and then 41-year bonds were auctioned in 2014. Today, the treasury bond with the longest maturity term within the portfolio of Peru's government debt instruments is the 2055 BTP.

DATE OF NOMINAL BTP PLACEMENTS *

COUNTRY	2001	2002	2003	2004	2005	2006	2007	2008	2010	2011	2013	2014	2016	2017	2018	2019
9 Mar.03	X															
10 Apr.03		X														
21 Jun.03			X													
25 Sep.03	X															
10 Jan.04	X															
18 Jan.04		X														
22 May.04		X														
21 Jun.04	X															
8 Oct.04			X													
18 Jan.05		X														
11 Jun.05			X													
7 Mar.06				X												
12 Aug.06			X													
11 Feb.07				X												
9 Oct.07			X													
9 Jul.08			X													
11 Feb.09				X												
10 Mar.10				X												
10 Aug.11				X	X											
31 Jan.12																
12 Sep.13										X						
5 May.15					X											
12 Aug.16					X											
12 Aug.17					X											
12 Aug.20					X											
12 Sep.23											X					
12 Aug.24												X				
4 Jan.26											X					
12 Aug.26						X										
12 Aug.28													X			
12 Feb.29											X					
12 Feb.29															X	
12 Aug.31								X								
12 Aug.32														X		
12 Aug.34																X
12 Aug.37							X									
12 Aug.40																X
12 Feb.42									X							
12 Feb.55												X				

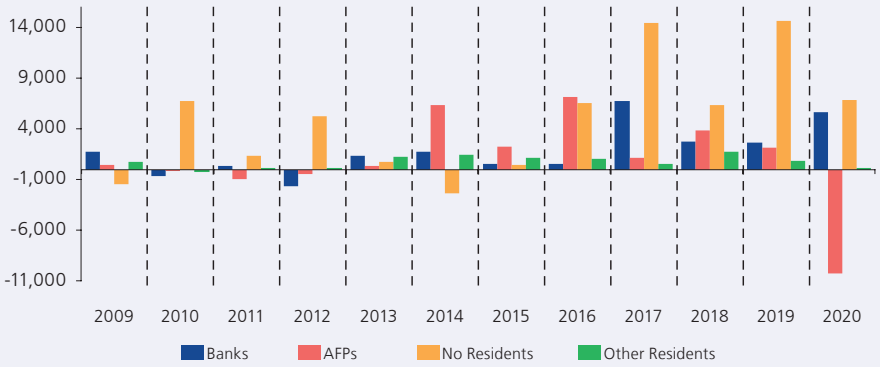
* Corresponds to the year of the first placement of each bond. Reopenings are not considered.

Main BTP holders

Attracted by Peru's good macroeconomic fundamentals, the better credit ratings of its sovereign debt,[18] and high interest rate spreads amidst an international context of low interest rates and high global liquidity, non-resident investors have been the main holders of Peruvian BTPs (53 percent of total sovereign debt as of December 16) since 2010.

18 Peru was assigned investment grade by Fitch and S&P in 2007 and by Moody's in 2008.

CHANGES IN SOVEREIGN BOND HOLDINGS
(Million soles)



Non-resident investors' greater participation over time has also been reflected in the local foreign exchange market, where they traditionally sell dollars in the spot market to invest in assets in local currency and simultaneously hedge their positions in the derivatives market through forward contracts-buy. In general, these investors demand greater hedging operations in periods of depreciation of the PEN, but they do not withdraw from the market due to the country's good macroeconomic fundamentals.[19]

On the other hand, a sustained increase in AFPs' holdings of BTPs was observed between 2001 and 2007, whereas between 2010 and 2013 they sold their positions to non-resident investors. Subsequently, their participation grew in line with the new bonds issued by the government, but today, due to the exceptional withdrawal of affiliates, the AFPs have settled S/ 8.81 billion between March and September 2020.

Moreover, the participation of commercial banks in the BTP market has grown from 7 percent in 2007 to 19 percent in 2020. In recent years, banks have demanded high-quality assets such as BTPs to meet liquidity coverage requirements.

Main characteristics of BTPs

As of September 2020, nominal bonds represent 98 percent of the total balance of bonds, with the bonds maturing between 2028 and 2037 –that is, with maturity terms between 7 and 16 years– standing out in terms of balances. By holder, non-resident investors are the main holders of medium-term bonds (BTP 2026 to 2032), while banks are the main investors of short-term bonds (BTP 2023 and 2024), and insurance companies are the main holders of long-term bonds (BTP 2042 and 2055).

19 It is worth mentioning that the AFPs are also important participants in the foreign exchange market they demand dollars in the spot market to invest abroad and offer dollars in the derivatives market for hedging purposes, non-resident investors being the main counterpart group for these entities in this market.

CHARACTERISTICS OF SOVEREIGN BONDS
(Million soles)

Date of maturity	Coupon Maturity	Placement Date	Al,19 de Noviembre				Volatility 2020*	Negotiated amount 2020 (Datatec)**	Rotation ratio (%)
			Balance	Market value	Yield rate	Yield rate (Average 30D)			
12 Sep.23	5.200	22 Jun.12	1,309	1,481	0.65	0.61	3.7	73	5.6
12 Aug.24	5.700	7 Nov.14	6,739	7,949	0.84	0.89	3.9	827	12.3
12 Aug.26	8.200	3 May.06	12,517	16,653	1.82	1.94	8	1,938	15.5
12 Aug.28	6.350	7 Oct.06	14,472	17,446	2.97	3.08	15	2,138	14.8
12 Feb.29	6.000	10 Jul.13	31	37	3.10	3.19	10	0	0.0
12 Feb.29	5.940	6 Dec.18	15,467	17,361	3.09	3.22	14	2,012	13.0
12 Aug.31	6.950	24 Apr.08	14,748	17,692	4.07	4.13	14	1,912	13.0
12 Aug.32	6.150	21 Jul.17	14,077	15,638	4.28	4.35	19	1,236	8.8
12 Aug.34	5.400	20 Jun.19	11,007	11,229	4.75	4.80	20	1,503	13.7
12 Aug.37	6.900	26 Jul.07	14,699	17,514	5.26	5.17	21	1,747	11.9
12 Aug.40	5.350	12 Mar.19	8,261	8,224	5.46	5.43	20	1,478	17.9
12 Feb.42	6.850	27 Jan.10	4,443	5,162	5.57	5.57	26	260	5.8
12 Feb.55	6.174	9 Jul.14	2,272	2,625	5.57	5.62	36	13	0.6
Total Nominal			**120,043**	**139,010**				**15,136**	**12.6**
13 Oct.24	6.840	13 Oct.04	884	1,112	-0.95	-0.73	13		
12 Feb.30	2.890	22 Aug.14	77	90	0.48	0.75	23		
31 Jan.35	7.390	31 Jan.05	911	1,442	1.22	1.29	9	24	0.0
12 Feb.40	3.140	15 Aug.14	228	283	1.72	1.70	33		
12 Aug.46	3.830	28 Nov.06	424	533	2.58	2.51	18		
12 Feb.54	3.260	1 Aug.14	383	433	2.86	2.75	22		
Total VAC			**2,907**	**3,892**				**24**	**0.0**
Total			**122,950**	**142,902**				**15,160**	**12.3**

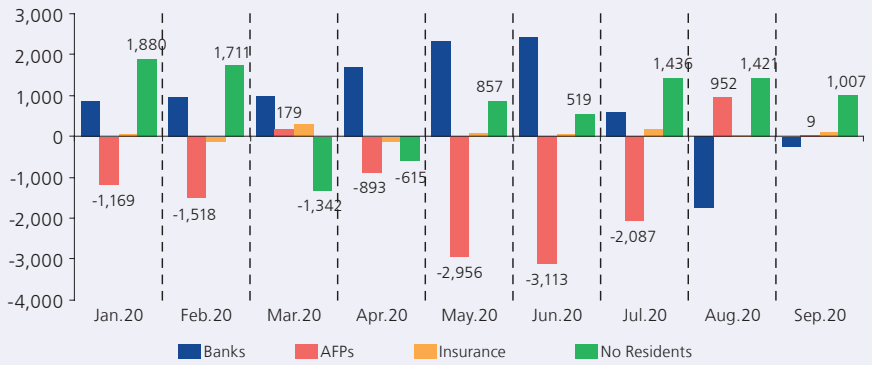
* Annualized standard deviation of the daily variation between January and November 2020.
** Monthly average between January and September 2020.
*** Average monthly amount traded over the balance of November 2020.

BTPs are traded on the Datatec platform on an over-the-counter basis (OTC). Since 2003, the annual amounts traded have increased from S/ 4.12 billion in 2003 to S/ 166.78 billion in September 2020. In terms of average monthly trading amounts, 2020 has been the year with the highest level in both Datatec and OTC, while the average turnover ratio between January and September 2020 is similar to that of 2018. The most traded bonds today are the ones maturing between 2026 and 2031 (with 5-year to 10-year maturity terms).

Behavior of BTPs during the COVID-19 pandemic

The structure of BTP holdings has changed since April 2020 due to uncertainty in the external financial markets associated with COVID-19 and due to the Congress measures about the withdrawal of pension funds. On the one hand, the supply came from the AFPs, which settled bonds (S/ 7.19 billion) to pay the fund withdrawals approved by Emergency Decrees 034-2020 and 038-2020 and Law 31017, while on the other hand the MEF issued BTP 2029, 2032, and 2034 for a total of S/ 2.52 billion in the local market, with BTP 2029 standing out as the largest bond issuance in the year (S/ 1.19 billion). No other new bond issuances were made during the months of April, May, June, and July. On the side of demand, non-resident investors and banks were the main buyers of BTP bonds (with S/ 2.19 billion and S/ 5.14 billion, respectively).

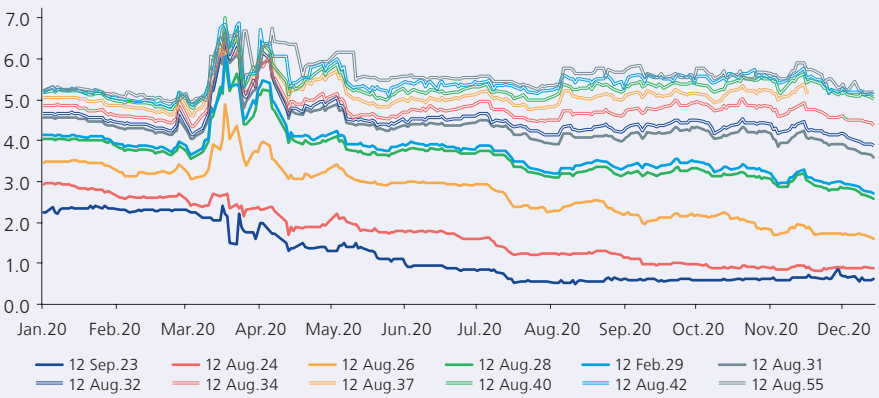
CHANGES IN SOVEREIGN BOND HOLDINGS
(Million soles)



As for trading in the secondary market, a significant reduction was observed both in the daily amount traded and in the number of operations at the beginning of the confinement period, but such reduction quickly reversed as restrictions on economic activity were lifted.

Moreover, yield rates temporarily rose at the beginning of the pandemic (March and April), both in short and medium-term bonds (which include from BTP 2023 to BTP 2029) as well as in long-term bonds (from BTP 2031 to BTP 2055), and normalized thereafter by June. It should be pointed out, however, that the average interest rates for all short and medium-term bonds have been below the average rates recorded since the date of placement of these bonds between March and November, whereas the average interest rates on long-term bonds have remained relatively high between March and November, which has led to the recent steepening of the BTP yield curve that was shown previously. In the week of November 10 to 16, the local political crisis pushed up interest rates, which rose 12 basis points on average.

BTP YIELD RATE
(%)



In terms of volatility, Peruvian bonds have shown high variability between March and April 2020 due to the uncertainty caused by COVID-19 in financial markets. Thus, nine of the fifteen nominal bonds showed higher volatility in 2020 than in previous years (volatility being understood as the standard deviation of the mid price variation). In the case of VAC bonds, three of the current six bonds show the greatest price changes, the greatest variations being observed in March 2020. Likewise, the volatility in all bonds was higher between March and October than the level of volatility observed between January 2019 and February 2020, and the volatility of the VAC bonds reached its highest level in March. The most volatile bonds were BTP 2055 (not very liquid), BTP 2042, BTP 2040 and BTP 2032, their prices being more affected by interest rate changes since they have the longer maturity terms.

ANNUAL VOLATILITY OF NOMINAL BONDS *

	12-Sep-23	12-Aug-24	12-Aug-26	12-Aug-28	12-Feb-29	12-Feb-29	12-Aug-31	12-Aug-32	12-Aug-34	12-Aug-37	12-Aug-40	12-Feb-42	12-Feb-55
2007			8.5										
2008			**13.6**							15.5			
2009			7.4				9.1			10.0			
2010			5.3				5.8			5.3			
2011			7.3				10.0			11.0			
2012			4.3				7.4			8.1		8.3	
2013	**7.9**		8.5				12.1			14.0		17.5	
2014	5.2		6.0		8.2		8.6			8.9		11.4	
2015	4.6	4.7	5.1		6.8		7.8			11.3		12.9	9.2
2016	4.7	**5.9**	7.3		**11.4**		10.2			11.2		11.5	11.2
2017	2.5	2.8	3.4	3.9	6.6		5.2			6.0		7.1	7.4
2018	2.0	2.7	3.6	4.2	4.5		4.9	4.9		5.3		8.4	8.7
2019	1.8	2.3	3.0	3.7	5.1	3.9	4.9	4.9	7.0	6.1	5.2	7.2	9.2
2020**	3.4	3.6	7.2	**13.7**	9.8	**13.5**	**13.1**	**17.6**	**19.0**	**20.0**	**18.9**	**24.7**	**34.3**

* Standard deviation of the daily variation.
** As of November 17, 2020.

ANNUAL VOLATILITY OF VAC *

	12-Sep-23	12-Aug-24	12-Aug-26	12-Aug-28	12-Feb-29	12-Feb-29
2016	4.8	13.6	6.5	18.5	22.4	17.2
2017	7.4	8.1	8.5	8.3	**23.1**	**28.7**
2018	6.9	9.9	**11.5**	10.2	15.4	12.0
2019	6.0	4.9	8.9	16.6	17.3	14.8
2020**	**11.9**	**21.7**	8.4	**31.3**	17.7	21.5

* Standard deviation of the daily variation.
** As of November 17, 2020.

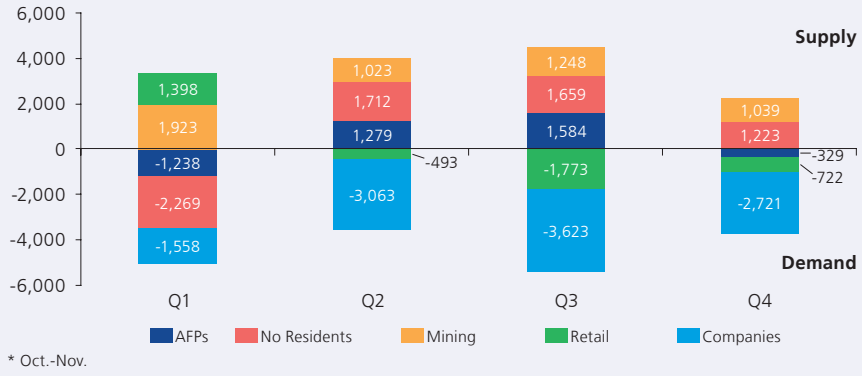
Box 7
EVOLUTION OF THE FOREX MARKET AND CURRENCY FLOWS BY TYPE OF AGENT DURING THE PANDEMIC

The COVID-19 pandemic has affected the behavior of foreign exchange market participants in heterogeneous ways. The Forex flows by type of market agent and their relationship with the dynamics of the foreign exchange rate are discussed herein.

The medium-term determinants of the exchange rate are associated with macroeconomic fundamentals such as the trade balance, capital flows, and deviations from the interest rate parity. In the short run, the dynamics of the spot exchange rate reflects the behavior of the main market participants as well as their expectations regarding these fundamentals and the events that affect their portfolio decisions or the management of their economic activities.[20]

The graph below shows the total of exchange flows (spot and derivatives) in the local market by institutional investors (pension funds and non-residents) and individual participants (mining companies, minor participants, and other companies). Arbitrage transaction flows are not included.

TOTAL EXCHANGE FLOWS 2020
(Million US$)



The foreign exchange demand increased significantly in March 2020, driven by non-resident investors' reaction to the greater global financial uncertainty generated by the COVID-19 pandemic. These agents demanded dollars, mainly through foreign exchange derivatives.[21]

20 Evans and Rime (2019), for example, describe the role of market agents in transmitting their expectations towards the dynamics of the foreign exchange rate.

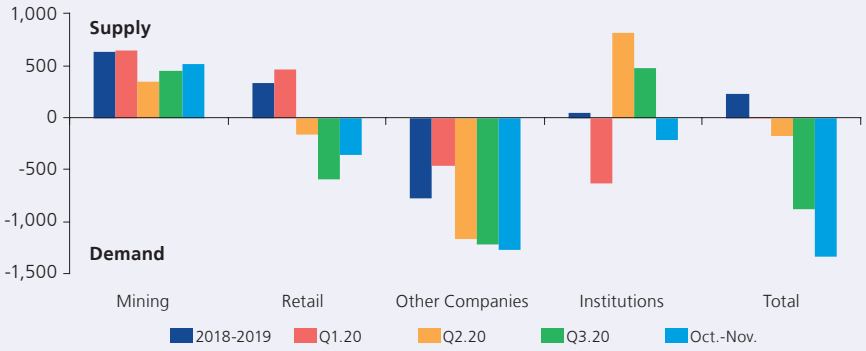
21 A description of the transmission mechanism of derivatives transactions to the spot exchange market can be seen in Cano-Alva and Humala (2017).

The demand pressure was offset in the second quarter of the year by the supply impulse that came from the partial liquidation of the AFP's portfolio in dollars (to face the approved withdrawals of funds) and by lower financial uncertainty as a result of the monetary and fiscal measures against the effects of the pandemic implemented globally. In this quarter, however, mining companies and minor participants reduced their supply of dollars in the spot market (and even generated net demand for dollars), while the net demand from other companies increased. The lower supply of dollars from mining companies and minor participants was associated with the impact of COVID-19 on economic activity (lower income from mining exports and tourism).

In the third quarter, the net demand from minor participants and other companies, which continued to increase in the spot market, was in part offset by the AFPs' higher supply of currency in the derivatives market in anticipation of higher withdrawals. As a result, the balance went from a net spot supply of US$ 224 million in the 2018-2019 period to a net spot demand of US$ 879 million (in monthly averages) in the third quarter of the year.

In the fourth quarter (until November), the supply of mining companies showed levels similar to those observed before the pandemic, while the net demand of minor participants decreased gradually. On the other hand, demand from non-resident investors increased (in spot and derivatives) in the first half of November, influenced by political events, although this effect was reversed with a strong net supply of derivatives from these agents in the second half of the month.

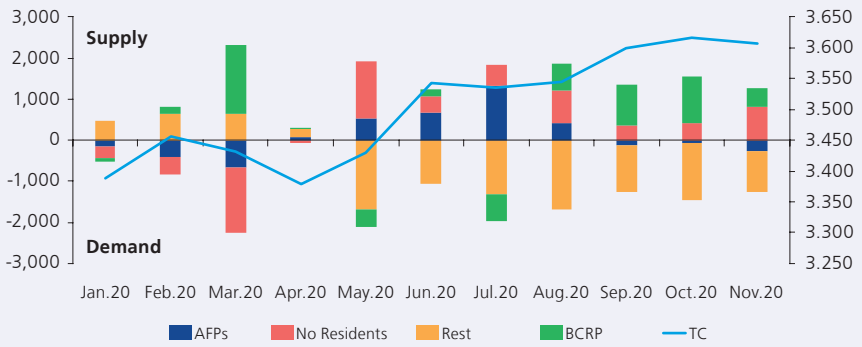
EXCHANGE FLOWS SPOT 2020
(Monthly Average in Millions US$)



Non-resident investors' increased Forex demand in March generated depreciation pressures on the PEN, which were offset through the intervention of the Central Bank in the Forex market (US$ 1730 million in the first quarter) mainly through the use of derivatives (FX swaps-sell). On the other hand, since depreciation pressures were lower in the second quarter, the net intervention of BCRP was equivalent to a demand of US$ 225 million, met mainly through the maturity of Forex instruments. In the third quarter, the depreciation pressure was less intense but more regular than in the first quarter, with which the Forex intervention was equivalent

to a supply of US$ 993 million, while in the fourth quarter, the exchange intervention was equivalent to a supply of US$ 1591 million.

EXCHANGE FLOWS, NET INTERVENTION AND EXCHANGE RATE 2020
(Million US$)



Private pension funds

Because of the partial dollarization of their investment portfolios (due to their investments abroad), pension funds usually represent net spot demand. Given that their pension obligations are in soles and that the return on their investments in dollars is affected by the depreciation of this currency (appreciation of the sol), the AFPs hedge their positions with forward sale positions (forex offer in derivatives).

So, given the liquidation of their positions in dollars to face withdrawals of funds, the AFPs went from showing a net demand of dollars in the spot exchange market in the first quarter of the year to showing a net supply of this currency between April and July. As from August, once the withdrawal of funds had partially concluded, the AFPs resumed their demand for dollars, but at levels lower than those seen at the beginning of the year.

Moreover, the AFPs also increased their portfolio coverage ratio in dollars from around 30 percent in February to 45 percent in October, increasing their Forex supply due to their positions in derivatives. The risk that regulations could authorize greater withdrawals of funds would have led the AFPs to take this hedge to take advantage of a high exchange rate for eventual future sales.

Non-resident investors

Non-resident investors are not a homogeneous group in terms of their investment strategies or horizons, but they have in common that they seek positions in soles for their investment portfolios[22]. For this reason, they offer dollars in the spot market to obtain soles with which

22 These investors use as reference global indices such as JP Morgan's EMBIG (Emerging Market Bond Index Global) in foreign currency and the GBI-EM (Global Bond Index - Emerging Market) in local currencies (Arslanalp, 2020).

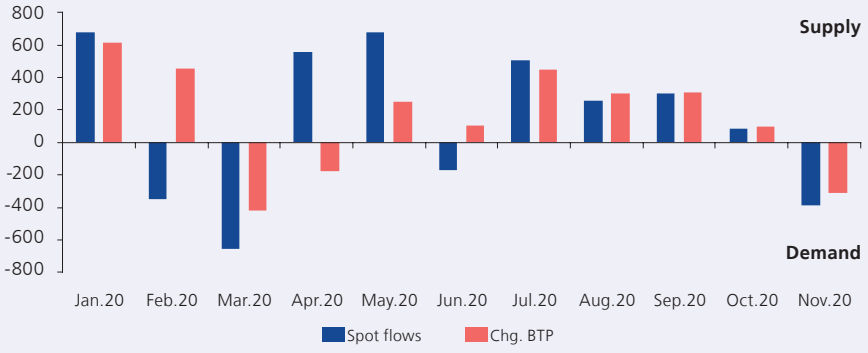
they can acquire, for example, Peruvian Treasury Bonds (BTP). They are attracted by the interest rate differential between sovereign bonds and the expectations of appreciation of our currency (which adds profitability to their portfolios).

However, Forex volatility and expectations of depreciation of the PEN expose them to a currency risk that can partially or totally reverse their expected return, so according to their expectations, they can hedge their BTP holdings (valued in dollars) with forward purchase positions. Eventually, if depreciation pressure is intense, these investors can take forward buying positions directly to speculate (without having prior positions in BTP).

Non-resident investors started the year with spot supply and demand flows in derivatives. In March, due to greater global financial uncertainty and to the start of mandatory confinement in our country, these investors reduced their BTP holdings and demanded spot and derivative dollars. Their coverage ratio went from 60 percent in January to over 80 percent in mid-March.

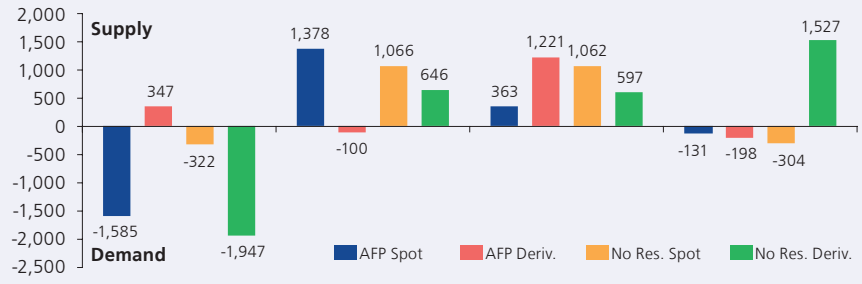
Then, in the following months, they resumed their spot offering to progressively recover their BTP holdings. In addition, they gradually reversed their coverage ratio (around 70 percent as of October), so they maintained a net forward offer during the second and third quarters. Political uncertainty in November, however, led them to reduce their positions in BTP.

NON-RESIDENT SPOT OFFER AND VARIATION OF THEIRS BTP HOLDINGS 2020
(Million US$)



The joint exchange flows of institutional investors (AFP and non-resident investors) registered a net demand in the first quarter (in spot and derivatives), but a net supply in the rest of the year. The spot offering prevailed in the second quarter, while the offer in derivatives was higher in the third quarter. Between October and November, the supply of derivatives was partially offset by spot demand.

EXCHANGE FLOWS OF AFP AND NON-RESIDENT INVESTORS 2020
(Million US$)



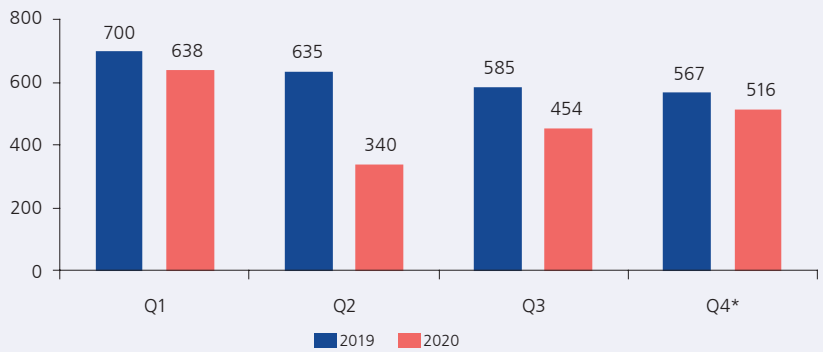
* Oct.-Nov.

Mining companies

Because this segment is directly associated with exports, it is a regular supplier of dollars in the spot exchange market. In the second quarter, however, cash sales of dollars fell substantially due to the lockdown of mining activities[23]. With the partial reopening of the economy, dollar sales increased again in the third quarter, but they are still at lower levels than those seen in previous years.

This evolution of mining companies' dollar supply is consistent with the evolution of its export earnings. The latter fell from a monthly average of US$ 2.1 billion in the first quarter to US$ 1.4 billion in the second quarter, but are estimated to have recovered to pre-pandemic levels (to about US$ 2.2 billion) in the third quarter.

EXCHANGE FLOWS OF MINING COMPANIES 2020
(Monthly Average in Millions of US$)



* Oct.-Nov.

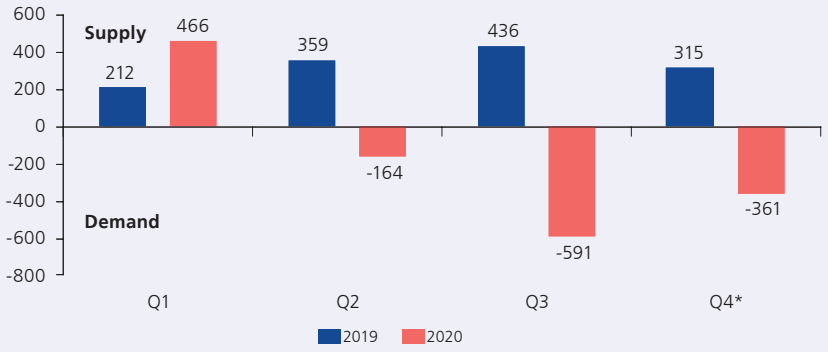
23 t is worth mentioning that the sale of dollars by mining companies is seasonally higher during the first quarter due to the effect of companies' regularization of taxes in this period.

Minor participants

This group includes companies of various sizes and individuals that carry out purchase or sale operations of dollars with banks in amounts of less than US$ 500,000. Therefore, it is a heterogeneous group with diverse economic activities and forex expectations. In recent years they have been net suppliers of dollars in the spot market, but as a result of the restrictions associated with the pandemic, this segment represents a net demand for dollars since May.

This higher net demand is associated, in part, with the reduction of the usual sources of supply in this group. External tourism, for example, has decreased substantially given current mobility restrictions, thus reducing the granular supply of dollars. As a result, average monthly sales of dollars associated with tourism and with remittances from abroad would have shown a reduction in the second quarter, recovering thereafter in part in the third quarter.

EXCHANGE FLOWS OF RETAIL PARTICIPANTS 2020
(Monthly Average in Millions of US$)



* Oct.-Nov.

Other participants

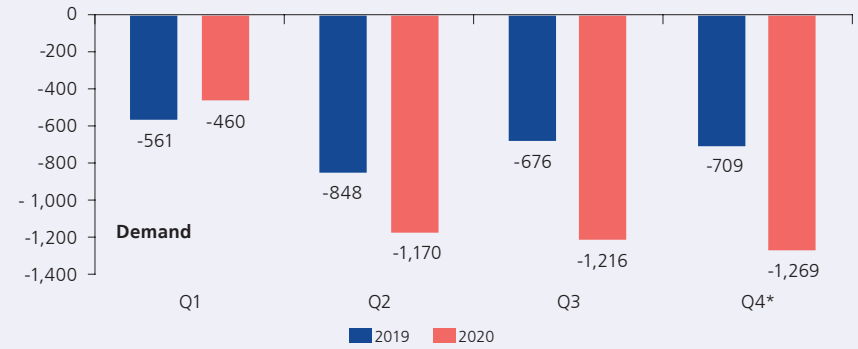
This segment can generate supply or demand for dollars, but the net flow is usually demand, in part due to the partial dollarization of firms' balance sheet or due to their financing their medium-term operations (loans or bond issuance) in dollars. Part of the exchange risk generated is hedged with cash flows or with positions in derivatives (although relatively few companies use them). After the 2013-2015 depreciation period, which generated foreign exchange losses in many of these companies, a significant percentage of them reduced their exposure through higher purchases of dollars or through the reduction of their liabilities in that currency[24].

Even though the average monthly demand for dollars in the first quarter of 2020 was US$ 460 million, lower than in previous years, this demand for dollars rose considerably in the second

24 Corporate earnings were affected by a depreciation of nearly 30 percent in that period (Humala, 2019).

quarter of 2020. The higher demand in the spot market is associated with the economic impact of the pandemic. The contraction of activity has reduced the generation of income, particularly in dollars (for example, lower accounts receivable), whereas, in some industries, accounts payable would show a lesser reduction, thus generating a net demand for dollars.

EXCHANGE FLOWS OF OTHER PARTICIPANTS 2020
(Monthly Average in Millions of US$)



* Oct.-Nov.

Foreign exchange expectations

A progressive reversal of the economic impact of the COVID-19 pandemic would eventually lead institutional investors to resume their usual exchange flows of spot demand and supply with derivatives from pension funds as well as their spot supply and demand with derivatives from non-resident investors. The resumption of regular mining activities and favorable terms of trade would allow this segment to resume their usual levels of foreign exchange offer. On the other hand, however, the reversal of exchange rate pressures will depend on how much of the increased demand from corporations and minor participants remains after the crisis is over.

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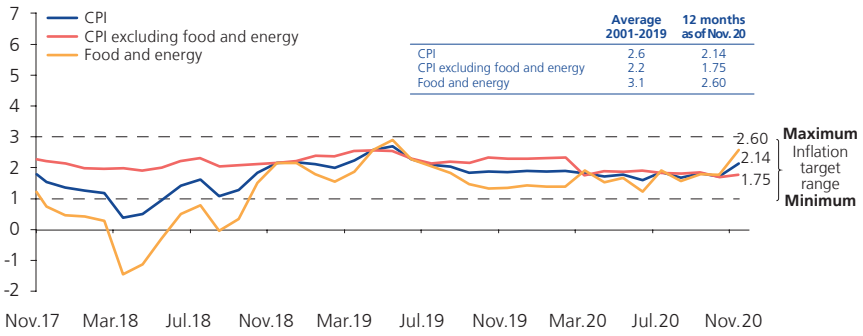
VI. Inflation and Balance of Inflation Risks

Recent Inflation Trends

103. Year-on-year **inflation** increased from 1.69 percent in August to 2.14 percent in November, driven by the increase in the foreign exchange rate, by higher costs due to health control measures, and by some supply-side factors in food prices. In response to this, one year-ahead inflation expectations rose from 1.57 percent to 1.68 percent in the same period, while core inflation rate decreased slightly, from 1.79 to 1.75 percent, remaining in the lower part of the target range. This result is consistent with the different inflation trend indicators that also register levels in the lower part of the target range, with the exception of the 63rd percentile which is below the lower band of the target range.

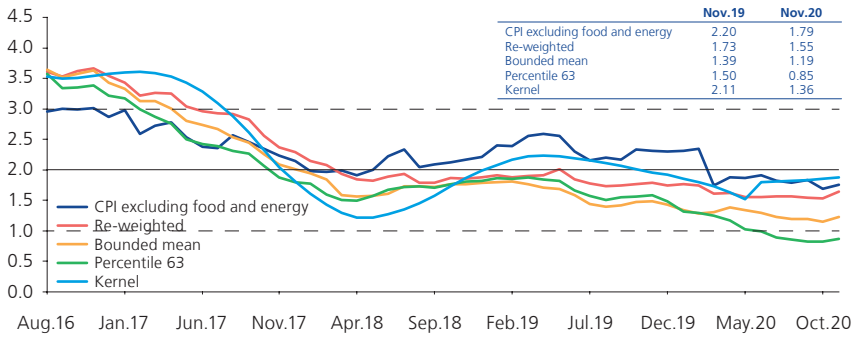
Graph 98
INFLATION
(Last 12-month % change)



Graph 99

MEASUREMENTS OF THE INFLATIONARY TREND

(Last 12 months % change)



Memo:
1. CPI excluding food and energy: CPI excluding food, fuel and electricity.
2. Re-weighted: Reduces the weight of items with greater volatility, considers the original weights of each item between the standard deviation of their monthly percentage changes.
3. Bounded mean: Weighted average of the percentage change of prices between the 34th and 84th percentiles.
4. Percentile 63: Corresponds to the percentage changes of the item located in the 63th percentile.
5. Kernel: Corresponds with the trend from a weighted moving average of current, past and forecast inflation, where the weights are calculated from an inverted parabolic function called kernel. Weights are obtained for 6 periods of past inflation and 6 periods of forecast inflation.

104. The changes observed in the GPI index between the months of January and November responded to the measures taken in the face of the coronavirus outbreak. Compulsory confinement and lower activity after the lockdown established in March caused a decline in income and less demand pressure on prices, bringing inflation gradually down to a negative monthly rate of -0.27 percent in June. Then, the CPI registered a monthly rise of 0.46 percent in July due to the recovery of the items whose supply had contracted in the previous month due to the effect of low prices. In the months thereafter, the variation in prices was mainly due to the adjustment of electricity rates and the higher prices of some food products, the supply of which was below the levels seen in the previous year.

105. Thus, between January and November 2020, the general price level increased 1.92 percent compared to the same period of the previous year. The CPI without food and energy grew 1.41 percent in this period, while the food and energy CPI grew at a higher rate (2.53 percent). Moreover, the prices of food and beverages increased by 2.71 percent, while energy prices grew by 1.35 percent.

Table 49
INFLATION
(% change)

	Weight	2019	2020	
			Jan. - Nov.	12 months
CPI	**100.0**	**1.90**	**1.92**	**2.14**
1. CPI excluding food and energy	**56.4**	**2.30**	**1.41**	**1.75**
a. Goods	21.7	1.39	1.45	1.48
b. Services	34.8	2.86	1.39	1.92
2. Food and energy	**43.6**	**1.43**	**2.53**	**2.60**
a. Food and beverages	37.8	1.00	2.71	2.81
b. Fuel and electricity	5.7	4.32	1.35	1.24
Fuel	2.8	-0.39	-5.65	-6.21
Electricity	2.9	8.04	6.45	6.73

106. The services with the highest price increases in year-on-year terms were education services (2.0 percent), although they registered a lower rate than the annual average for the last nineteen years (4.1 percent). The prices in other services, such as health, meals outside the home, and "other personal services" –which includes the services of household employees and cleaning, among others– also showed lower rates than those registered in the 2001-2019 period.

Table 50
INFLATION
(Annual % change)

	Weight	2019	Nov.20	2010-19 Annual Average
CPI	**100.0**	**1.90**	**2.14**	**2.59**
Education	**9.1**	**5.22**	**1.98**	**4.14**
Health	**1.1**	**1.47**	**0.90**	**2.83**
Meals outside the home	**11.7**	**1.69**	**0.84**	**3.53**
Other personal services	**3.3**	**1.35**	**0.98**	**1.52**
Of which:				
Household employees	2.1	0.81	0.45	0.70
Housekeeping	0.2	1.45	-0.02	1.69
Various repair	0.1	0.52	-0.44	2.27
Home repair and maintenance services	0.0	0.00	0.88	2.09

107. At a disaggregate level, the items with the greatest positive contribution to inflation from January to August were chicken meat, electricity, and education (tuition and fees), while the items with the greatest negative contribution to inflation were potatoes, gasoline, and national transportation.

Table 51
WEIGHTED CONTRIBUTION TO INFLATION: JANUARY -NOVEMBER 2020

Positive	Weight	% chg.	Contribution	Negative	Weight	% chg.	Contribution
Chicken meat	3.0	13.7	0.34	Potato	0.9	-18.2	-0.20
Electricity	2.9	6.4	0.23	Gasoline and lubricants	1.3	-12.4	-0.15
Tuition and tuition fees	8.8	2.0	0.21	National transport	0.3	-14.8	-0.05
Urban fare	8.5	1.8	0.15	Olluco and similar	0.1	-23.5	-0.03
Beef	1.2	9.2	0.12	Avocado	0.1	-12.1	-0.03
Medicinal products	2.1	5.4	0.11	Airfare	0.4	-7.5	-0.03
Tickets to shows	1.7	6.9	0.11	Tomato	0.2	-11.4	-0.03
Meals outside the home	11.7	0.8	0.10	Tangerine	0.2	-10.7	-0.02
Sugar	0.5	15.6	0.08	Fresh legumes	0.2	-9.3	-0.02
Banana	0.3	15.3	0.06	Internet service and others	0.8	-1.9	-0.01
Total			**1.51**	**Total**			**-0.57**

Food

Chicken meat was among the foodstuffs with a greater positive contribution to inflation since its price increased 13.7 percent between January and November, accumulating a year-on-year increase of 15.9 percent in November. The 29 percent price rise it recorded in July largely offset the price reduction seen in the previous months as a result of a decline in sales during the quarantine. Although the subsequent reopening of restaurants in July partially reactivated demand, the supply of the poultry industry continued to be affected thereafter by the lower sales during the quarantine, and has remained below the demand requirement.

Beef prices rose 9.2 percent on average between January and November due to supply problems caused by the state of emergency, recording as of November a year-on-year increase of 9.8 percent. In addition to the fact that the quarantine made it difficult and expensive to move cattle from the highlands to Lima, frost in the high Andean areas increased livestock mortality. The price of beef continued to be affected In the following months by the rise in the exchange rate, which increased the cost of imported inputs for fattening domestic cattle.

The price of sugar increased 15.6 percent in the period between January and November, showing a year-on-year increase of 15.1 percent at end November. The price of this product increased 33 percent in the first four months of the year due to maintenance stoppages in the sugar factories and to the higher prices of imported sugar. An increase in the demand for foods that could be stored, such as sugar, was also observed when the state of health emergency was declared and confinement measures were established, which also affected the supply of some sugar mills due to the lower supply of inputs for the production process

given marketing and transit difficulties. The negative variations observed in recent months responded to some correction after the price increase registred in the quarantine months, in a context of greater supply to Lima from the large sugar companies.

The price of potatoes stands out among the food prices with the greatest negative contribution to inflation. Lower prices were observed in most of the period due to lower demand, which was also affected by the temporary closure of restaurants. Moreover, there was a lower supply associated with farmers' difficulty in placing their products in the absence of transporters, which also caused a decline in farm prices. On the other hand, the price of potatoes increased in the months of September and October due to the lower supply of some varieties of this crop, affected by the decrease in rainfall in the central highlands.

Public services

Electricity rates have registered successive increases since June, in accordance with the adjustments authorized by regulator Osinergmin. As a result, these rates have increased 6.4 percent from January to November and 6.7 percent in the last twelve months.

As from June, the electricity generation price was updated, taking into account the quarterly settlement carried out by the regulator to compensate for the differences in the contracts between generation and distribution companies. A series of parameters included in the distribution component were also adjusted, including the Fondo de Compensación Social Eléctrica (FOSE). The increases in subsequent months corresponded to increases in the transmission component due to the collection of tolls on some lines and due to the update of charges to ensure the continuity of the electricity service. In addition, the adjustments also reflected the increases in the foreign exchange rate and the wholesale price index.

Services

The increase in the category *Education – tuition and fees* reflected the rise of education prices made at the beginning of the school year, which was in part offset by the reduction of tuition and fees in some schools after mandatory confinement was established due to the lower cost of online classes compared to face-to-face classes.

Fuel

The ex-plant prices of local refineries decreased, albeit with lags, in response to the decrease in the price of oil in the international market. The variations were also consistent with the decrease in international price of gasoline on the Gulf Coast of the United States, in line with the import parity price.

National Transportation

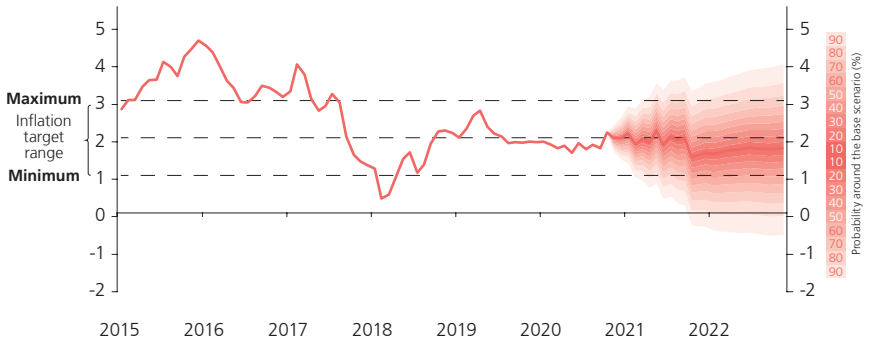
Decreases were recorded in interprovincial bus fares, a measure adopted to stimulate demand and recover income. The land transport sector was affected by confinement and by the suspension of travel decreed in the fight against the pandemic. Despite the sanitary protocols applied for trips on buses and in land terminals, demand continues at low levels.

Forecasts

108. BCRP monetary policy actions are taken on the basis of inflation forecasts and projections of inflation determinants elaborated using all the macroeconomic and financial information available at the time of decision making. Key indicators include inflation expectations, imported inflation (including the impact of the foreign exchange rate), and inflationary pressures both on the side of demand and on the side of supply.

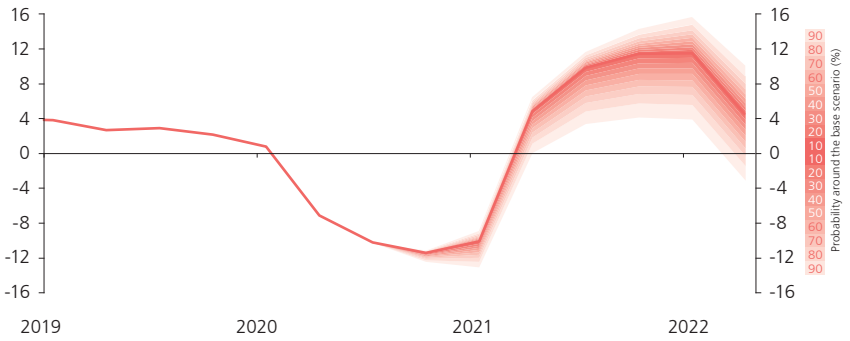
109. Based on the information available and taking into account the gradual normalization of activity, year-on-year inflation is expected to lie in the lower part of the target range during the forecast horizon. This projection is based on estimations indicating the convergence of inflation expectations to the mean value of the target range, in a context in which the output gap will gradually close as the aggregate economy recovers its prepandemic levels. The determinants that would maintain inflation below the central value of the target range include a still negative output gap and the partial reversal of the factors that decreased supply in the quarantine period.

Graph 100
INFLATION FORECAST: 2020 - 2022
(Last 12-month % change)



110. A recovery in activity is expected in 2021 and 2022, supported by the normalization of local production, the gradual improvement of the economy of our main trading partners and the terms of trade, a highly expansionary monetary policy stance, and the strengthening of business confidence. A sustained recovery in the level of economic activity is therefore expected.

Graph 101
GDP GROWTH FORECAST: 2020 - 2022
(Last 12-month % change)



111. Inflation expectations, estimated on the basis of surveys conducted with financial and non-financial firms and economic analysts, reveal that inflation is expected to show rates between 1.5 and 2.0 percent in 2021 and rates of 2.0 percent in 2022, which indicate that expectations remain around the central value of the target range. Moreover, in November 2020, one-year-ahead expected inflation registered 1.68 percent.

Graph 102
EXPECTATIONS OF INFLATION FOR THE NEXT YEAR
(% points)

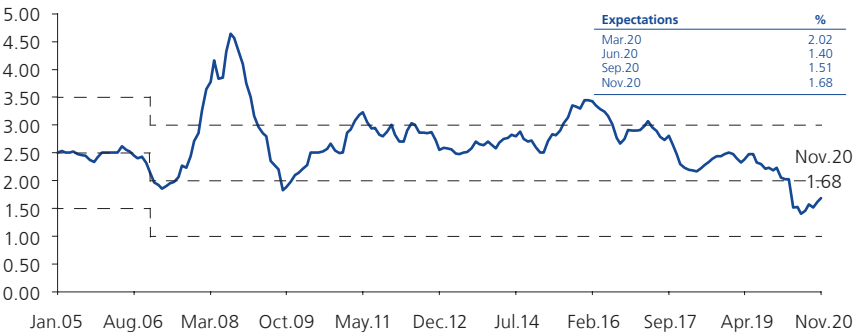


Table 52
SURVEY ON INFLATION EXPECTATIONS
(%)

	IR Dec.19	IR Jun.20	IR Sep.20	IR Dec.20*
Financial entities				
2020	2.20	1.00	0.90	1.50
2021	2.30	1.80	1.55	1.50
2022	--	--	--	2.00
Economic analysts				
2020	2.20	1.50	1.40	1.50
2021	2.50	2.00	2.00	1.90
2022	--	--	--	2.00
Non-financial firms				
2020	2.40	2.00	2.00	1.90
2021	2.50	2.20	2.00	2.00
2022	--	--	--	2.00

* Survey conducted as of November 30.
IR: Inflation Report.

112. Another determinant of inflation is the imported component, which combines the effect of the international prices of goods our country imports –e.g. crude, wheat, soybean and maize, among other products– with the effect of exchange rate variations (US dollar-PEN exchange rate).

Average import prices are projected to increase by 3.8 percent in 2021 and by 0.9 percent in 2022, mainly due to the higher prices of food commodities and oil. Moreover, the surveys on expectations about the US/PEN exchange rate show expected levels between S/ 3.43 and S/ 3.54 per dollar for 2021 and levels between S/ 3.40 and S/ 3.50 for 2022.

Table 53
SURVEY ON MACROECONOMIC EXPECTATIONS: EXCHANGE RATE
(%)

	IR Dec.19	IR Jun.20	IR Sep.20	IR Dec.20*
Financial entities				
2020	3.37	3.40	3.47	3.55
2021	3.35	3.37	3.40	3.43
2022	--	--	--	3.40
Economic analysts				
2020	3.38	3.40	3.50	3.56
2021	3.37	3.40	3.50	3.54
2022	--	--	--	3.50
Non-financial firms				
2020	3.40	3.40	3.50	3.55
2021	3.40	3.40	3.46	3.50
2022	--	--	--	3.50

* Survey conducted as of November 30.
IR: Inflation Report.

The aforementioned effects would help inflation to remain around the center of the target range, despite the fact that the output gap is expected to register negative values in the forecast horizon.

Balance of Risks of the Inflation Forecast

113. The balance of risks in the inflation forecast in this Report is less skewed to the downside than in the September Report, because the shocks described below are considered less likely.

- **Domestic demand shocks**

  A recovery of the main economic sectors is considered in the forecast horizon in a context of political, financial and social stability that would favor private investment and job creation, although the contingency of a significant upsurge of COVID-19 contagion or a delay in the distribution of vaccines may offset the recovery in domestic demand. In addition, political and social instability, or delays in the execution of public spending, are other contingencies that could reduce private spending on both consumption and investment, and affect such recovery. All of these scenarios would imply a more negative output gap.

- **External Demand Shocks**

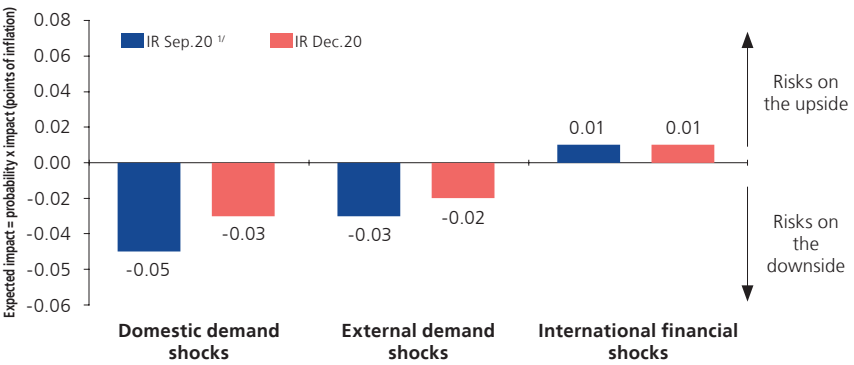
  The possibility of upsurges of the pandemic in the world generates the risk of a contraction in world demand for our export products and, additionally, the risk that the prices of our main export goods –minerals– will decrease. On the other hand, lower world growth and, particularly lower growth in the emerging economies, could lead to a higher demand for safe assets, increasing debt spreads for these economies (more restrictive financial conditions) and favoring the appreciation of the US dollar against the currencies of emerging countries, such as the PEN. The depreciation of the sol would have the effect of increasing inflation, offsetting in part the effects of lower aggregate demand produced by lower external demand and the higher cost of external financing.

- **External Financial Shocks**

  An increase in risk aversion would lead international investors to increase their search for safe assets: (i) strengthening the currencies of developed countries and weakening emerging currencies (e.g. the PEN), and (ii) raising debt spreads for the emerging countries (more restrictive financial conditions). The strengthening of the more stable currencies, such as the

dollar, would also push up inflation due to the effect of higher imported inflation.

Graph 103
BALANCE OF RISKS AGAINST THE BASE SCENARIO



1/ Corresponds to the Risk Balance 2020 - 2021.